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ABSTRACT

An overview of a series of 10 regional seminars to improve communications between schools and the community is presented in this report. The program format and a list of 1972 seminar sites are followed by the major addresses of experts in various fields which were presented at the seminars. The purpose of the conferences, as indicated in a statement of objectives by a businessman, was to sharpen the focus of occupational education as a way of looking at education for all students in a total system involving community, business, schools, and people. The 10 major addresses included in the document are grouped under five subject areas: Economic aspects of education and the community; how the local economy uses school products; how, where, and when people get trained; a plan for educational change; and a workable model for school-community relations. (MF)

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ED130142

"SCHOOL AND COLLEGE ADMINISTRATORS' SEMINARS: COMMUNITY RESOURCES"

REPORT AND MAJOR ADDRESSES

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INTRODUCTION

In recent years, career education and occupational development for youth have become national priorities. Work forms the foundation of our way of life, and the American democratic system depends upon the capacity of each individual to contribute his talents to that system. Therefore it has become crucial to develop more efficient means of channeling human resources--manpower--into productive positions within society.

The goal of efficient and effective manpower training is to meet the supply and demands of the labor market. Educators and businessmen alike have worked to achieve this goal, but both communities are coming to recognize that neither educational institutions nor industrial training programs alone can do so. Public schools and colleges need the business and industrial community to absorb their outputs, and the schools and colleges need inputs from business and industry to guide them in planning more efficient and effective programs.

This need for a closer relationship between the world of work and the world of education prompted a recommendation from the Advisory Council for Technical-Vocational Education in Texas in its Second Annual Report to the State Board for Vocational Education on September 11, 1971. The council recommended the development of a series of seminars to improve communications between educational institutions and the community.

Advisory Council's Recommendation

The State Board of Education make provision for the development of a series of regional seminars during 1970-71 for the attendance of the local school superintendent and his curriculum

administrator from the school districts in the State with over 4,000 ADA. The seminars should also include junior college presidents and their deans of technical-vocational education, manpower programs, labor market information, and the influence of those upon education programs.

As a result of this recommendation, a series of regional seminars were held throughout the State in an effort to improve the influence of public education upon manpower programs and other elements related to the labor market. This publication gives an overview of these seminars and presents the major addresses by experts in the various fields which were presented at the seminars.

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FOR DISCUSSION PURPOSES

PROGRAM FORMAT
SCHOOL AND COLLEGE ADMINISTRATORS' SEMINAR

"The Use of Community Resources in Administering Technical-Vocational Education"

Sponsored by the Regional Education Service Centers, the
Advisory Council for Technical-Vocational Education
in Texas, and the Texas Education Agency

8:30 - 9:00 a.m.	Registration
9:00 - 9:15 a.m.	Welcome - Mayor, Chamber of Commerce Representative, or Education Service Center Executive Director
9:15 - 9:30 a.m.	Statement of Objectives - Member of the Advisory Council for Technical-Vocational Education in Texas
9:30 - 10:15 a.m.	"Economic Aspects of Education and the Community" - Educator and Teacher-Trainer from a State University
10:15 - 10:30 a.m.	Break
10:30 - 11:00 a.m.	"How the Local Economy Uses Our School Products" - Leaders from Local Business and/or Industry
11:00 - 11:30 a.m.	"How, Where, and When Do People Get Trained" - Leader in Manpower, Labor Economics, and Education
11:30 - 1:00 p.m.	Luncheon Speaker "A Plan for Educational Change" - Texas Education Agency Personnel
1:15 - 2:00 p.m.	Small Group Sessions Group I - Techniques to Bring Schools Closer to Community Needs Group II - Provisions to Provide Educational Opportunities for Adults Group III - How to Expand the Learning Situation Beyond the Classroom Group IV - How to Obtain a Community Commitment to Career Education
2:00 - 2:10 p.m.	Break
2:10 - 2:30 p.m.	Small Group Reports
2:30 - 3:00 p.m.	"A Workable Model for School-Community Relations" - Prominent Individual Knowledgeable in Aspects of School and Community Relations
3:00 - 3:15 p.m.	Closing Remarks - Seminar Chairman

LIST OF SCHOOL AND
COLLEGE ADMINISTRATORS' SEMINARS

1972

Sites	Regional Education Service Center Hosts
1. September 19 - Marriott Hotel Houston	Dr. Tom Pate Educational Systems Director Region IV Education Service Center P. O. Box 863 Houston, Texas 77002
2. September 20 - Sheraton Marina Hotel Corpus Christi	Mr. Glen Morgan, Assistant Director Region II Education Service Center 109 North Chaparral Corpus Christi, Texas 78401
3. September 21 - Holiday Inn McAllen	Mr. Joe Money Instructional Services Director Region I Education Service Center 101 South Tenth Street Edinburg, Texas 78539
4. September 26 - Abilene Civic Center Abilene	Dr. Allen Clark Region XIV Education Service Center P. O. Box 3235 Abilene, Texas 79604
5. September 28 - Odessa Junior College Odessa	Mr. Paul Brooks, Counselor Generalist Region XVIII Education Service Center P. O. Box 6020 Midland, Texas 79701
6. October 3 - San Antonio Community College San Antonio	Mr. Michael Cantu, Coordinator Communications and Dissemination Region XX Education Service Center 1550 Northeast Loop 410 San Antonio, Texas 78209
7. October 10 - Cibola Inn Arlington	Mr. R. P. Campbell, Assistant Director Administration and Planning Region XI Education Service Center 2821 Cullen Street Fort Worth, Texas 76107
8. October 11 - Alcove Restaurant Plainview	Dr. G. Woodie Coleman Director of Programs Region XVII Education Service Center 700 Citizens Tower Lubbock, Texas 79401

Sites	Regional Education Service Center Hosts
9. October 12 - Hilton Inn El Paso	Mr. Coy Motley, Director Administrative Services Region XIX Education Service Center 6501-C Trowbridge El Paso, Texas 79905
10. October 17 - Stagecoach Inn Salado	Mr. John Etheredge Vocational Orientation Consultant Region XII Education Service Center P. O. Box 6428 Waco, Texas 76706

STATEMENT OF OBJECTIVES

Vernon McGee, Executive Vice President
Management Services Associates, Inc.

Thank you very much, Mr. Joplin. Yesterday in order to keep from chiseling on Alton Ice or some of the rest of you to stake me to the registration fee of $5, I went down to City National Bank of Austin to cash a check. While I was there a woman telephoned about the disposition of a $1,000 bond she owned. The clerk asked, "Is this for conversion or redemption?" There was a long pause, and finally the lady inquired, "Am I talking to the City National Bank or the First Baptist Church?"

Ladies and gentlemen, the purpose of this conference is neither to convert educators nor to redeem businessmen. We are not here to post-mortem the failure of businessmen to estimate accurately the number of jobs that they will need employees in five and ten years from now. Nor is the purpose of this conference to berate educators for failing to develop highly specific job skills in pupils. This is not a post-mortem of the past. Rather, it is a glimpse of the future.

The primary purpose of this conference is to sharpen the focus of occupational education as a way of looking at education for all students - for developing the potential of all individuals. And I would emphasize that today I hope that you would look at it as a total system--involving a community, businesses, schools, and people. You know, it is rather strange that we adapt ourselves very easily to some kinds of systems in ordinary living. The automobile that Mr. Roy Davis drove us over here from Lubbock in this morning, is a system of mechanical parts working for a single purpose - mobility. The airplane that I flew to Lubbock in is a combination of auto-pilot and other components for flying at a specified altitude.

We also need systems - social systems for different elements to work together in cooperative interrelationships for the accomplishment of a single purpose. As

you enter the dialogue today it is well to remember that all of us are meeting on a certain common ground. You see, educators are currently reexamining their role in society, and their responsibilities to that society. Now, it may shock some of you educators to realize that businessmen are in exactly the same position. They, too, are having to reexamine the responsibilities of business to the society of which they are part and to reexamine their role and their function.

To a noneducator, like myself, and to most businessmen, those of you who are engaged in occupational education are doing something distinctly different. What you are doing from our point of view has at least three significant characteristics: 1) What you are doing is oriented to the full variety of people who have need for it; you are not concerned with just one age group, but with all people who need some occupational education. 2) You are doing it in very non-traditional ways. I don't know if you have ever thought of it this way, but you are putting the needs of people ahead of the needs of institutions. This is highly significant. I can think of many social institutions to which we belong where as members our responsibilities are to serve the institution. Here you are trying to convert the institution to serve the needs of people. 3) The third significant characteristic, it seems to me, is that you have added a totally new dimension of time. You don't care <u>when</u> the individual in need of occupational education has that need. You try to meet it at night. You'll do it in the summer time. You'll do it at a time most convenient to the people in need. That new dimension of time is unique to our system of public education.

Finally, may I remind educators that businessmen are also going through some fairly dramatic changes. The most popular non-fiction books of recent years all reflect attacks on out-moded methods of business management. Consider some of the titles: Laurence Peter's <u>The Peter Principle</u>; Robert Townsend's <u>Up the Organization</u>; or Charles Reich's <u>The Greening of America</u>. Now comes along a new

book, and what's the title? Struggle for Identity: The Silent Revolution Against Corporate Conformity, written by no less than Roger M. D'Aprix, an executive in the highly successful xerox corporation.

Or consider that next Monday in Dallas 500 highly selected businessmen will meet together for the Southwest follow-up to the White House Conference on the Industrial World Ahead: A Look at Business in 1990. In an invitational letter, Carmon Stiles, Dallas field office director for the U. S. Chamber of Commerce, wrote a paragraph that interested me. It reads this way: "Today's world of business has been largely built upon response to crisis. This conference presents a planned world of business built on accomplishment by objective. It presents today's problem only as a basis for shaping the world of business in 1990."

Now some of you might feel a little more comfortable if I paraphrase that same paragraph to read this way. Today's world of education has been built largely upon response to crisis. This conference presents a planned world of education built on accomplishment by objective. It presents today's problems only as a basis of shaping the world of education of 1990.

Well, from such common ground what we are really concerned with in this conference today are the dynamics of a social system that will bring meaningful occupational education to the unfolding development of the full potential of individuals.

"Economic Aspects of Education and the Community"

Dr. William Luker, Professor of Economics
North Texas State University

Two excerpts from W. B. Yeats and T. S. Eliot serve to set my remarks concerning current economic knowledgability into bas relief. First, Yeats in "The Second Coming" gives his view of the modern age:

> Turning and turning in the widening gyre
> The falcon cannot hear the falconer;
> Things fall apart; the center cannot hold;
> Mere anarchy is loosed upon the world,
> The blood-dimmed tide is loosed, and everywhere
> The ceremony of innocence is drowned;
> The best lack of all conviction, while the worst
> Are full of passionate intensity.

And Eliot in "The Hollow Men" describes the same era:

> We are the hollow men
> We are the stuffed men
> Learning together
> Headpiece filled with straw. Alas!
> Shape without form, shade without color
> Paralyzed force, gesture without motion
> . . . . . .
> Remember us--if at all--not as lost
> Violent souls, but only
> As the hollow men
> The stuffed men.
> . . . . . .
> This is the way the world ends
> Not with a bang but a whimper.

THE PROBLEM

Contemporary American society is beset by problems which the general public finds incomprehensible. The social fabric is strained at every seam by a range of conundra that defy the understanding of common sensitivity. Without exception, these problems have economic forces at their root. It would, of course, be the coarsest kind of disciplinary ethnocentrism to assume that the problems facing a modern industrial society do not also have significant

sociological, anthropological, psychological, psycho-biological, cultural, political, and historical dimensions, and it would be naive to assume that these disciplines cannot contribute significant insights into current problems. But this does not negate the basic premise of this speech, namely that the problems facing American society in the later part of the twentieth century will be incomprehensible to the general public unless that public also has an adequate grasp of the economic forces which are intrinsic to those problems.

The economic insights required to understand these structural deficiencies can be divided into three categories. First, there are the broad social problems--recessions and inflation, poverty, ecological damage, population growth, resource exhaustion, decay of the inner city, international trade, crime, race, power, transportation, resource allocation, economic growth, physical, mental, and dental health, ad infinitum--which require theoretical understanding.

Second, there are economic problems of the individual and family such as borrowing, saving, investing, buying, risk sharing, income management, budgeting, and general household control.

Third, there are problems of job markets which concern a range of issues including the relationship between income and marketability, the nature of today's and tomorrow's job markets, the opportunities for training, which condition existent and future job markets in our society.

In summary, an understanding of contemporary American society (how it works, what its problems are, and some viable, non-revolutionary solutions to its problems) requires multi-dimensional economic understanding related to the roles of the citizen, consumer, and worker.

Against this critical need for economic literacy is the cruel fact that, by any objective measure of economic understanding, the American people throughout the total spectrum of socio-economic classes are economically illiterate.

Some examples of economic illiteracy are developed briefly as follows: In the arena of social economics, the general public believes that money is valuable because it is backed by gold. But because gold is a rather unwieldly and inconvenient device, the American people also believe that a surrogate for gold in the form of currency and coin is provided by the Federal Treasury. It is also believed that this currency and coin have "real" money backing them in the form of gold. And because currency and coin, like gold, are also occasionally inconvenient and unwieldly, the people believe that the check or the credit card exists as a convenient substitute. But the belief system also assumes that each check written or each credit card transaction has an equivalent amount of currency and coin in the vault of some bank which in turn has an equivalent amount of gold in Fort Knox. Of course, this belief pattern is grossly inaccurate. The money supply does not consist of gold or currency or coin. Eighty percent of the money supply is "checkbook money," which literally means that checks have nothing backing them except productivity, political stability, and faith. Furthermore, an agency called the Federal Reserve Board controls the quality or size or rate of growth of this checkbook money. All of this rather esoteric discussion of money would be melodramatic if the money supply were not critical to economic health. At least one prominent American economist (Milton Friedman) believes that fluctuation in the money supply produced by an agency, which for all practical purposes is unaccountable, is the cause of economic instability. And while economists are not in complete agreement as to the exact degree to which changes in the money supply cause inflations and recessions, there is a rather general consensus that the rate of growth in the money supply is critical to the well being of the economy. In this context, public attitudes have a direct and significant impact on the lives of all Americans. The fact that the American people still believe that the money supply

is gold, that the money supply is valuable only if it has some precious metal or commodity backing it, represents an error in perception of immense proportions. In addition, such a lack of knowledge produces a range of responses which have powerful negative inputs on the economic health of our society.

Economic illiteracy also extends to the individual and the family. The American consumer is incredibly incompetent, lacking basic skills in buying, borrowing, risk sharing, insurance, tax paying, and personal financial management. All of these skills by any rational standard are necessary to fiscal well being and happiness.

A final example of economic illiteracy involves the world of work or jobs (the whole focus of this conference). It has been observed that two of the most critical decisions that men and women make in their lives involve mate selection and job choice. In neither of these two vital areas can it be said that people behave rationally. Certainly in job selection, job markets are entered blindly without reference to forces which determine (1) income levels, (2) the real nature of the job, (3) the realities of the job market (present and future), (4) the intrinsic qualities of the job, (5) the long-run growth possibilities of the job, (6) individual interest patterns, and (7) compatibility of the job with the individual skill levels.

Thus, while all of the problems faced by the people in our society have economic forces at their center, individuals are not prepared to deal with these problems rationally because they do not understand the economic dimensions. And this failure of understanding extends through all socio-economic classes and touches all areas of people's lives. Democracy is, therefore, in a desperately precarious institutional situation.

INHIBITORY FORCES

The problem of economic illiteracy is compounded by forces which have acted to prevent the introduction of an objective, relevant economic education program in Texas public schools, colleges, and universities. These forces are as follows:

1) The first is academic tradition and institutional inertia. Certainly there are many contexts in which some institutional resistance to change is valuable, perhaps even critical, in withstanding the capricious machinations of zealots. But this same tradition, valuable in some situations, in many others can block the authentic, creative development of viable programs which are necessary to the amelioration of contemporary problems. In the arena of educational change and curricular reconstruction, the inhibitory role played by tradition and inertia is quite evident. Economic education has not been a part of the public school's social education curricular processes; nor has it been a part of teacher training programs because of the dictates of the past as well as institutional resistance to change.

2) A second force inhibiting the introduction of economic insights into curricular patterns and training programs is academic hubris. The community of academic economists has almost totally abdicated any responsibility toward the process of translating the complex and abstract discipline of economics into a language which is comprehensible to the general public. This academic disinterest in mass public education is complicated by jealousies, such as competition in curricular processes which has nothing to do with fulfilling community needs.

3) A third inhibitory force is economic vested interest. The introduction of economic education programs will produce curricular "opportunity costs," i.e., it will demand that some cherished activities by "given up." The vested interests

of teachers of history, political science, geography, and English, in the status quo, make the solution to the problem much, much more difficult.

4) A fourth blocking force is ideology. This is particularly true in the arena of social economics. Often when the economic dimensions of contemporary social problems are discussed in classrooms, the subject of bias arises. Whose economic analysis is going to be taught is the question which is often raised. The economics of the labor movement? The economics of the American Bankers Association? The economics of the U. S. Chamber of Commerce? The economics of the John Birch Society? The economics of the communist party? Whose economics? The fact that ideology is an issue reflects a lack of understanding in that economics is a scientific structure which transcends socio-political commitments. Milton Friedman, a politically conservative economist, uses the same analytical apparatus as the politically liberal Paul Samuelson, who is a Nobel Prize winner. The differences between Friedman and Samuelson fall not in the area of fact, but in the area of value judgments, i.e., in the arena of social choice.

In summary, economic illiteracy is a critical problem of education. Unless solutions are developed which can sensitize the mass of American people to the economic dimensions of contemporary problems, the viability of democratic institutions will fall into serious question. One solution to the problem of economic illiteracy is a massive educational program that is (1) multi-dimensional, (2) organic, (3) integrative, (4) developmental, and (5) institutional.

A multi-dimensional program is one which incorporates activities that include awareness, in-service and pre-service teacher education, curricular development and reconstruction, materials development and dissemination, and research.

An organic educational program is one that is cognitive, conative, and methodological. A program must be cognitive in the sense that it must transmit the basic structure of the discipline in all of its dimensions to teachers and pupils. The program must be conative in that it must alter a range of attitudes so that economics is revealed as an important element in the curricular process, one which is free from socio-political bias. The program must be methodological in that it must develop a capacity in teachers to translate the core of the discipline into curricular languages which are appropriate to the grade levels and subject matter areas in which they are functioning.

An integrative program in economic education incorporates all of the critical insights into existent subject areas. For example, one of the reasons why there is so much mathematical illiteracy is that mathematics has not been integrated into other disciplines and subject areas. Mathematics is largely taught as if it were a thing apart from daily living processes.

A developmental program is one which extends K-12. It is not difficult to recognize that a low level of mathematical literacy would exist if the first exposure of pupils to the basic concepts of arithmetic and mathematics were a one-semester course during the twelfth grade. It seems logical, therefore, to assume that economic literacy cannot be achieved by a single course in economics during the twelfth grade.

An institutional education program is one which motivates existent public and private institutions to make economic education an integral part of their programmatic thrust. That is to say, a genuinely effective education program must become a part of the institutional structure of those elements of society charged with education.

In summary, one solution to the problem of economic illiteracy is a mass program of education which includes awareness, in-service and pre-service teacher education, curricular development and reconstruction, materials dissemination and research, cognitive, conative, and methodological teacher training processes, an integrative and developmental total program package, and the institutionalization of the commitment to econmic education. Nothing short of a program which incorporates all of these components will effect the kinds of changes that are necessary to implement the goal of economic literacy.

AN ORGANIZATIONAL NETWORK

Any objective review of the inhibitory forces which are blocking the introduction of an authentic economic education program must lead to the conslusion that these forces are so strong that the catalytic power of broad-based, organized community efforts is needed to attach the problem. In the summer of 1968, in recognition of this need, a group of interested educators, businessmen, labor leaders, leaders in Texas agriculture, and university professors created a non-profit educational corporation called the Texas Council on Economic Education as an affiliate of the national Joint Council on Economic Education. The Texas Council on Economic Education is a non-partisan, broad-based activity which is committed to eliminating economic illiteracy in all of its demensions. The organization serves two basic functions: First, it neutralizes ideological differences by assuring that the basic ideas taught are as free from socio-political bias as they can be, or at least, it assures that all points of view with respect to the critical issues of the society will be represented along with the theoretical apparatus of the basic discipline of economics. Second, the organization solicts funds and non-monetary resources from public and private groups which can be used to supplement existent public resources. These funds can be employed to overcome the barriers of tradition, inertia, and vested interests discussed above.

In addition to the Texas Council on Economic Education, a network of Centers for Economic Education on university campuses has been created. These centers provide three valuable and necessary services.

First, they offer consulting assistance in the development of economic education programs, curricular reconstructive projects, materials development and dissemination, and research.

Second, the centers play a vital role in the development of pre-service university programs.

Third, the centers serve as clearinghouses and developmental agencies for new materials and new research.

Thus, it can be seen that the Texas Council on Economic Education and its action arms, the Centers for Economic Education on university campuses, are essential instruments through which the attack on economic illiteracy is being waged. But it must be understood that the Texas Council and the Centers are not the organizational structures by which economic illiteracy can be penetrated. They are, instead, the catalytic agents through which existent institutions (public schools, universities, education agencies, Education Service Centers) are motivated to accept their responsibility for solving the problem of economic illiteracy. I urge all who are interested in joining us in the development of economic education activities in any of its dimensions (social, personal-familial, world of work) to contact the Texas Council on Economic Education or the Centers for Economic Education in your region (the Centers for Economic Education at North Texas State University, University of Texas at Arlington, Texas Technological University), or the Education Service Center in your region. The names of the appropriate individuals and their addresses are as follows: Dr. William A. Luker, Director, Center for Economic Education at North Texas State University, N. T. Box

5427, Denton, Texas, 76203; Dr. Larry Ziegler, Director, Center for Economic Education at the University of Texas at Arlington, Arlington, Texas; Dr. John Gilliam, Director, Center for Economic Education at Texas Technological University, College of Business Administration, Lubbock, Texas, 79409.

PROGRAMS

The programmatic thrust of the Texas Council on Economic Education and its Centers for Economic Education consists of the following:

1) Awareness activities which are designed to create in all of the appropriate constituencies the need for economic education,

2) In-service and pre-service teacher education activities which are output-oriented,

3) Organic curricular reconstruction,

4) Materials development and dissemination, and

5) Action research.

Since it is not possible to describe all of the programs of the Texas Council on Economic Education and its Center network, perhaps one or two examples will suffice. Last year, the Center for Economic Education and the Manpower Institute at North Texas State University, under the auspices of a grant from the Texas Education Agency, jointly conducted a series of in-service programs for junior and senior high school social studies teachers in manpower economics or career education. These seminars were conducted in the Education Service Centers at Waco, El Paso, Lubbock, and Houston with approximately 100 teachers participating. The program was designed first to increase teacher understandings of basic concepts relating to the world of work, e.g., income determinants, present and future job markets, available training facilities, job skills, and so forth. The seminar was also methodological; that is, it was designed to give teachers

delivery systems which would translate concepts of career education into curri ular languages and subject matter areas appropriate to the level and subject matter at which the teacher was functioning. The seminars were also conative; that is, they were designed to change biased attitudes of middle class teachers who, in the main, regard the university or colleges as the only legitimate avenue of social mobility, status, and happiness.

The program was evaluated in two ways. First, the teachers were pre- and post-tested in both the conative and cognitive modes. The results indicated that teachers significantly increased economic understanding and that their attitudes were changed to reflect greater openness toward non-progessional occupational modes and the value of job modes which are not traditionally associated with a university education.

Second, the pupils of these teachers were also evaluated. A quasi-experimental group, consisting of a sample of teachers participating in the seminars, and quasi-control group, consisting of a sample of teachers not participating in the seminars, were created. Quasi-control groups were matched to the experimental group by school and subject matter. The two groups of pupils were pre- and post-tested for understanding of the world of work and attitudes toward work modes. The results showed that pupils taught by teachers in these seminars increased their understanding of the world of work and altered in a more positive way their attitudes toward non-professional work modes. Pupils of teachers who were not in these seminars did not change in these two vital areas.

Another example of the programmatic thrust of the Texas Council and its Center network is in the area of research. The staff of the Center for Economic Education at North Texas State University recently completed a study of the bias displayed in elementary text materials toward technical-vocational work modes. Our staff surveyed all of the elementary basal readers which were on the State

adopted list. The survey made four basic analyses: (1) A complete count of all references to work modes, categorizing them as professional, technical-vocational, or unskilled; (2) an analysis of the treatment of work modes in terms of quality; (3) an analysis of the treatment of work modes in terms of emphasis; and (4) an analysis of the treatment of work modes in terms of realism. The results were clear: Basal readers are qualitatively and quantitatively biased against technical-vocational work modes.

This research is cited as a part of the programmatic thrust of our organization, not because the results are surprising but because they reflect both the negative attitudes toward work modes which are not traditionally "professional" as well as the degree to which this bias is a broader reflection of the deeper held biases of parents, teachers, administrators, and the general public.

SUMMARY

In final summary, society is beset by a range of problems--social, individual-familial, and world of work--which have economic forces at their root. In short, the American people are economically illiterate. This illiteracy can be penetrated only through a broad program of education which is integrative, developmental, cognitive, conative, methodological, and evaluative. Such a program must also extend through a range of programmatic activities including awareness, in-service and pre-service, curricular reconstruction, materials development and dissemination, and research. In short, my topic, "Economic Aspects of Education in the Community," can be translated to mean that all must share the responsibility for the integration of critical economic insights into existent curricular patterns. Let us make Yeats and Eliot non-prophets. Join us!

"Economic Aspects of Education and the Community"

Dr. Lewis M. Abernathy, Director
Manpower and Industrial Relations Institute

This morning, I would like to talk to you about human resource development from the point of view of a manpower economist. I do not use the term "economist" much, because it strikes fear into the hearts of most, and generally stands in the way of what I am trying to accomplish. In terms of human resource development, let me give you a little background on how an economist looks at human resource development. (1) When I speak of resources, I am speaking of those we use in the production process: human resources, natural resources and capital resources. Obviously as an economist, I am concerned with the combination of the quantity and quality of resources that go into the production process. It has been our historic ability, as a nation, to provide the proper combination of resources. This has been a determining factor in making this nation great. It makes us great, not only as a nation, but as a community. Without question, the most important resource is the human resource. It is the primary means, and the ultimate end; or reason for all economic activity. Now we have not only identified the most important resource, but also the most sensitive. I sometimes sense, that we treat human resources much in the same manner as other resources. They cannot be treated as such. They are adaptable, and potentially the most productive, but they are also the most perishable. If we misuse them, then we lose future productivity. If we don't use these resources then their productivity is lost forever.

Let us talk about some of the problems we are currently facing: Are our young people prepared for participation in a highly complex, competitive society? I would suggest to you that they are not, and I will try to give you some examples as to why they are not. Their unemployment rate in the 1960's never dropped below 12 percent. This is the unemployment for 16-19 year olds. It is currently

running about 16-18 percent. The unemployment rate for high school dropouts, or dropouts for the secondary system, is about 25 percent. If you are black or brown it is about 35 percent. This is a tremendous waste of resources. Part of that, obviously, is a lack of job opportunities. However, a great deal of the unemployment involves lack of skills and lack of knowledge. Point in fact, and I am certain that the businessmen here today will support this statement as they have all over the country, most of the youth coming out of high school, college, and universities do not possess basic labor force participation information or basic skills. What do I mean by basic skills? How to fill out a job application? How to apply for a social security card? Where to go when you are unemployed? What kind of training is available to you? Where do you go to get a particular training? If you drop out of high school or get through high school, what if you want to go to technical school? Where do you go? What do you do? Most of the counseling is obviously counseling for the colleges and universities. What national research we have in terms of youth participation, indicates that young people have very little knowledge about jobs. The one thing they seem to know about is teaching. For some strange reason particularly teaching in the public schools, and that is about all the counseling they get. The student-counselor ratio is 1,200 to 1 across the nation. I dare say it is not much better than that in Texas. They do not know about various skills. They do not know about employment opportunities. They do not know about how jobs change or why. This represents very little basic knowledge. They do not understand employer-employee relationships. They do not understand the responsibilities of an employee to an employer, and conversely employer to employee. They do not understand the need to coordinate and cooperate. They do not understand specialization and division of labor.

Now, let's look at the problems facing us in education and training. We assume no responsibility at the primary level for preparing young people for work force participation, we assume no responsibility on the secondary level and I can

guarantee you at college and university level we assume absolutely minimum responsibility. As far as we are concerned, we are still teaching to that 2% of the population, that 2% resembling the same 2% of the 1900's; those that did not come to colleges to learn how to earn a living. They were going to go back and get in a family firm. We still teach this way, for the great glory of mankind. We teach with one assumption, that mankind is not going to have to be involved in the production process. Yet 1/3 of our adult life is spent in producing goods and services in some type of job. Look at the drop out rates. Between first grade and high school graduation, we lose 1/3. If industry had that kind of efficency record, they would be out of business. We would not have to worry about them. They would simply just be out of business, unless they could float some sort of subsistency. If you take 100 college freshmen 4 years later 35 to 40 of them will have graduated. Five years later 45 to 50 will have graduated. So for most 4 year programs, you are not making it with 60 to 65%. Our records are even worse than that of the public schools. Look at youth alienation and frustration. As adults we say, "My God why are these people frustrated, they have got everything I say to you part of the frustration is because, (1) they do not understand the system. (2) Generally speaking as a result of that lack of understanding they are incapable of maximizing participation in the system. They are frustrated by something that they truly do not understand. They are turned off by education, that is meaningless, as far as they are concerned. There is little relevance between what they do in the classroom, and what they need to know for life. Having been in higher education and having traveled across the State, visiting in public schools, I can assure you for the most part they are right, not wrong. Right in the sense, that when we teach concepts, we teach them almost as entities within themselves. A major problem is a fractionalization problem. A math teacher is not a teacher first and a mathematician second, or a mathematician first and a teacher second. A student asks, why do I take Math I? What is the response? Whether it be at the

secondary public school level, college, or university, the response is the same. It is one of two things (1) "so you can take Math II" or (2) "because it is required." After a while they quit asking.

I sent my six year old to school this year and I cried. I cried because I know what is going to happen to him. The teacher is going to say, "draw a tree Matthew," and he is going to draw a Matthew type tree. She is going to say, "no Matthew that is not a tree," again she is going to say "draw a tree Matthew." He is going to draw the tree; he is a little stubborn. He will draw it the same way again, and she is going to say "F Matthew, this is a tree." My son is a little stubborn, but he is not stupid not even at six. He is going to say, "you are right teacher that is a tree." That is the beginning of the end. The end of any creativity, and individualism, that that boy has. I say to you that the system from start to finish is full of just that.

We are taking heterogeneous individuals with different physical and mental capabilities, different interests, all kinds of degrees of creativity, and pumping them through a constant mold. Studies indicate 75% of them go to college and 25% of them go to Voc-Tech. What we have been getting from Voc-Tech is changing you know, and I know. The dissident, the youth that can not make it in college prep programs, tragic. Many of the youth in college prep programs would not only prefer, but their interest and capabilities lie in the Voc-Tech area. This idea of social mobility through higher education, is frightening. I say to you, when only 20% of our work force needs to have a college degree in 1980 (4 years) and 75% of the students at the secondary level are going through college prep programs, something is wrong. I say to you, that we need to build a system that gives the individual the opportunity to maximize not only his own personal well-being, but also that of society. I am convinced that there is a harmony of interest here. As increasing numbers of individuals are dissatisfied, whether young people or old, if you do not think there

is some dissatisfaction with some middle age and older people with their jobs, you are sadly mistaken. If we do not permit the opportunity for an individual to maximize his own personal satisfaction in terms of labor force participation, we are in serious trouble as a community, a State, and as a Nation. We must deal with it. First we must view all education and training as an integrated system for human resource development. To put it another way, maybe I should take out the resource, and just say human development. I am not talking about education solely for labor force participation. I suggest to you, that when 1/3 of one's adult life is spent in labor force participation, it certainly needs to be a major consideration. I see all courses or all subject matter relating. If you are talking about language arts, you are talking about communication. If you're talking about history, you are talking about self identity. When we teach children about the importance of punctuality, completing assignments and following directions, why not give them examples of the necessity for these concepts in the real world? They do not understand how being tardy or absent can be very expensive to a business. On occasion, I do programs for private employers. I was working with a group of supervisors about two months ago. A supervisor told me about being out on a drag line which broke down. He sent a man, a 19 or 20 year old young man to pick up a wrench. It was about a 10 minute round trip. The man comes back about 55 minutes later. Well he said he did not kill him but he wanted to. He asked me what do you do about that? I said, "Well first I would fire that supervisor for being out there without a wrench to fix that drag line." Now we get to the youngman, sit him down and explain to him in dollars and cents what that particular operation cost per minute. Lay it out to him. It is not just his wage cost, it is all the wage cost of the other people who were down there also. If you have a group like that, tardy in the morning and high absenteeism, tell them what it means in industry. When a student says, why do I have to get to school on time? Why don't we tell him, if you do not get here, nothing happens. Group activity cannot go on and things cannot get done. Later

on in life if you do not get there goods and services do not get produced. It is a habit that one must get oneself into, if one is going to be a productive member of society.

Any subject that you want to talk about, you need to talk about it as it relates to the kinds of characteristics that one must have for participation. When we talk about training and educational facilities, we must recognize that they are all equally important qualitatively. An academic institution is no more, or less important than a technical training center. The quantitative use of those facilities will tend to vary over time, again, depending upon the demand/supply relationships. It is like saying that economists are more important than sanitation workers. We have to recognize the fact, that education and training is a cradle to the grave type process. People are going to leave the education process and they are going to return. That education and training, in its broadest sense, we can do it through TV. We can do some of it in the home. We do some of it in industry. Certainly we do some education and training in private and public technical institutes. We do training in the public school system. Understand that education and training must be a constant process. Individuals have to constantly up-date and increase their skills. Education and training processes that are responsive, representative of what we need to know, and need to do should be a combination of the mental and physical skills necessary. We have got to eliminate the idea that we separate the two skills. We need to have a system that permits an individual to discover his or herself. Discover in terms of interests and capabilities as you proceed through the system. A self awareness, a self recognition of their interest and capabilities. Then looking at the various jobs in terms of the kinds of skills and the kinds of life style associated. Work is important, in the sense that it is generally the way we identify ourselves. Students can understand this. What kind of life style

do you want? Obviously a life style of a traveling salesman's work is different from one who has an 8 to 4 job, and returns home in the evening. Students should understand what job requirements entail and the life styles associated with various occupations. They need to understand because they and "they alone" ultimately, given our society, are going to determine the interface between their own personal interest and capabilities in the job. All we can hope to do is create an environment, a human development environment, in which the probabilities of optimizing their decisions are maximized. That is economic education. Each individual is treated as an individual, participating in a process, that lets them see what they are, how they are changing, what their interests and capabilities are; and allows them to view the job opportunities, as efficiently as possible. We have not sufficiently prepared them for this. How well do students read? Eliminate the fractionalization; I am turned off with this. I find it among teachers of history. Well, I really came out of arts and sciences and I am not like the traditional history teacher in education. You know I just have a little more on the ball. I heard that in a coffee lounge in a public school and I just thought I was going to fall down. All right let us get on with this. If I had it within my power I would not ever want a Ph. D. degree, or Masters' or whatever else they wanted and then let us get on with the business of getting the job done. We are so overwhelmed with form. A doctor no more tells you what I do than a spook, unless one of you clowns come up and tell me to set an arm, that is a doctor. I like to think of myself as a teacher. I am not there yet, but that is where I am going and the greatest compliment that one can pay me is to say "he is a teacher."

There is a fractionalization between public school systems, community colleges and junior colleges, private and public technical training centers, and higher education facilities. We are not only fractionalized between institutions, we are fractionalized within institutions. You used to be able to speak of the social sciences.

Now you do not, you talk about a historian, about an economist, a sociologist, and about an anthropologist. It is as if a man were fragmented, as if people came in 50 or 100 pieces. That has got to go. All adults must assume responsibility, particularly those adults that are both involved in the production process, and are also parents. All adults must share the responsibility for education and training. This responsibility is greatest among those adults that are both involved in the production process and are also parents. I think that you are going to find that we must quit jumping around from a parent role to a businessman or businesswoman role, to teacher role, to a whatever type role, and view ourselves as members of the community and as members of the community responsible for the education and training of our young people, even if that occurs at a church picnic. Business people need to recognize what their present and future demands are, both qualitatively and quantitatively, in terms of human resources. They must be brought in as resource people, as they can lend special expertise to the training process. This can be done by bringing them in or by taking the students out to their facilities. That reminds me of the Chinese proverb that John Guemple uses on occasion: "I read and I forget, I see and I remember, I do and I understand." I believe in doing. Now understand that in education that part of the reason we do not do this is a cost situation. But I suggest that we take an increasing look at this situation; we need to know to what extent we can maximize the "do" kinds of situations. Education has been associated with the best method for a number of years.

Answer the questions of why. If you cannot, in the business when you are involved in a training program say why you are doing a particular thing or a particular concept, then I say drop it until you can come back and answer the question, because if you don't know why you are doing something, don't do it.

We have to get to projection; following up our students and finding out where they are going. When they are coming out of the public schools, where do the dropouts

go? What kind of jobs do they take? What kind of life do they wind up with? What is the relationship between the education they have, and their ability to deal with life? Were they short? We need to look at these things; public schools, colleges, and universities. We need to look at all the people involved in education and training, we have a responsibility in placement and follow-up as far as I am concerned. We need an evaluation process or evaluation techniques to examine both the process of the system and the product of the system. Now make no mistake, as professional educators, we either develop it ourselves; or it will be superimposed upon us. I have some colleagues called econometricians, and they have come up with cost benefit, cost effectiveness, and cost efficiency models that even frighten me. I can assure you that accountability and evaluation is upon you. You may not recognize it yet, but it is here. I would be for it even more if you participate in development of that accountability and evaluation, because I think there is certain uniqueness here, among teachers, that we need to deal with.

We need more vocational counselors and guidance people as resource personnel backing up the teacher, but the teacher has to know about job opportunities and jobs. He has to know because primarily the guiding that is going to be done, is going to be done by the classroom teacher. We do not have enough guidance and counseling people to do it. The ratio is 1 to 1,000 or 1 to 800, and there is no way they can cover that many kids. For the most part the teachers do it, and we have to recognize that. We have to back the teachers up as much as possible, but they have to be aware of the job market. As a matter of fact, in some National studies, they found that teachers were just slightly ahead of students in terms of their lack of knowledge of careers and the skills involved. Now there is something else we need to keep in mind, because it is going to be a growing problem. The point is, we are at a time now when we are trying to deal with quality. We have been so overwhelmed with people, that we have been doing a mass baby sitting operation for over 20 years.

Now comes the time when we are going to take a look at the problems, and get on with the ball game. Don't misunderstand me. Public schools have been great, colleges and universities have been great, and what I am talking about here is to shore up some weaknesses.

I am all for the production of theoretical economists. We need them, but we do not need as many of them as we are getting, and we need other types of economists. We need someone between the pure theorists and the citizen on the street that needs to know something about economics enabling the system to function effectively. We are going to have to compete with other things for the resources of this nation. The heyday when education got almost what it asked for is over. Now relatively speaking it is at its peak for vocational-technical eudcation, but I can assure you that will not last. That means we are going to have to show that we are effective, show that we are efficient, show that we are doing something that is meaningful. It means that we are going to have to show parents that when we kept little Johnny around for 13,000 or 15,000 hours, what we did with Johnny. We moved him A to M, or A to P, or A to R. When we get $100,000, we are going to have to show them what we did with the $100,000, $200,000, or $2,000,000. We are going to be able to show effectiveness. Even doing that, we are probably going to have, relatively speaking, fewer resources to do (a turn around) our job in the future. I don't see education getting the same slice of the pie and neither does anyone else in the 1970's that they got relatively speaking, in the 1960's. So we are going to try and turn it around with fewer resources.

We have to be responsible, we have to indicate and should indicate, in public education to businessmen that many of the basics that they have to teach in the businesses really should be taught in the public schools. I am looking at training programs from many business organizations, 50% of the time in that program, they are dealing with topics that all workers should know, and I am saying that anything all workers

should now know, should be included in the public school. I can understand training programs by private organizations that deal with unique skills. I do not understand training programs that deal in things that are necessary or required of all labor force participants. Educators have to assume that responsibility, and we must live up to it.

When a student asks why, why in terms of "why should I do this" or "why should I do that", answer the question. Deal with it. I say that education and training must be the road between where one is now, and where one is going. The further these young people go down the road, the more irreversible their decisions become. The more narrow their scope becomes in terms of their occupational opportunities, if nothing else, just because of time, or the time lag that occurs, when the student tries to attempt traveling the road with no guidance. In economics, we talk about opportunity cost. To the extent that an educational program now takes four years, when in reality we could do it in two or three, look at the cost to the individual. What could he have done, or where could he have gone with the additional participation time? Beyond that look at the cost to society. I say let's take a long look at what we are doing. Are we doing the kinds of things that students need, to deal with the problems that they face? I say this, in the broad sense, knowing full well that a significant number of those problems deal with labor force participation. When you get up in the morning and you look at yourself in the mirror, you can say, "I am trying to be more relevant - trying to deal with it in terms of the kinds of things that students need to know 5 or 10 years from now in this society. I am trying to deal with it as effectively and efficiently as possible." It is a little bit better today than it was yesterday because change does not come overnight. If you can look at yourself and say that, and smile, you have had a very good day as a teacher.

We formerly mentioned a lack of ability, on the part of the students to participate

in our very complex society, with consideration to the economic segment of that society. I guess this would necessitate some comments concerning a total human resource development system.

To begin, let's refer to unemployment. When we speak of unemployment, one should understand, that the extent we have unemployment, is the extent that we are not maximizing our capability of producing goods and services. In other words, for every day unemployed, we have lost that day's production in goods and services for that worker forever, never to be recovered. An increasingly important problem is, however, the problem of underemployment. Underemployment in the sense of a mismatch between an individual's capabilities and job performance, or the given job in which one finds oneself performing. Underemployment, is either a lack of knowledge, or the lack of the necessary skills.

To understand human resources, and how they relate in the market economy, we must also understand that our economic system is based on the individual's capability; or assumes that the individual has the capability of making the best possible decision for the individual, but also in the best decision for society. Now that only becomes possible if each individual possesses a knowledge of his capabilities, interest, and knowledge of job opportunities. Needless to say, in general we do not find that.

We must understand that the system includes participation in the production process, as well as consumption of the goods and services produced. I will not deal with the consumption sector of economics today, but nevertheless I will point to the fact that what happens in the consumption sector determines to a large extent what the job opportunities are, where the opportunities are now; and where they will be in the future. Not to do this will bring about a mismatch between the production of certain occupations, and the demands for those occupations. This results in either

unemployment or underemployment.

Now let's look for a moment at some of the forces bearing on the types of jobs that are available either in the community, in the State, and in the Nation. First, we have what we call, freedom of choice, in our society. This means that each citizen, according to the amount of money he has for expenditures, can determine the kinds of goods and services, and the quantity of those services that he or she will buy. In turn this indicates the need to various producers of the types of human resources, and the types of labor that are required in the production process.

As consumers vary their expenditure patterns, by type or quantity, it varies the type and quantity of human resources required in the production process. That is why, in economics or manpower, we talk about labor force demand, or human resource demand as a "derived" demand; it is a function of the demand for goods and services in our society.

Now we can see the change that has occured there, as a movement from the high percentage of our population engaged in agriculture production in the middle 1800's, 60% of our population in about 1860 to about 5% engaged in agriculture today. At the same time, we must realize that approximately 1/3 of the farmers produce about 75% of the farm output. The transition has been to an industrial society, where industry possess the greatest amount of employment opportunities. A second phase occurs, from industry to services. In other words, a change occurs from the production of things to providing services involving a significant change in kinds of jobs and quantities of people needed for those jobs. When you eliminated the need for a field hand to pick cotton, through the introduction of the mechanical cotton picker, expecting him to both operate and maintain that particular machine, you created a problem. You know that it doesn't stop there because the process

is dynamic. The producer or businessman, who is providing the goods and services is constantly searching for more efficient and effective means of combining resources, human and nonhuman, for production. He will combine those resources or attempt to combine those resources to minimize his cost. Now as labor costs tend to climb, vis a vis capital cost per unit of output, the producer tends to substitute capital for labor. This substitution reduces the amount of labor required for the production process, and also changes the type, as he introduces new capital. The skills possessed by the existing work force are generally not adequate. Two changes result. There is a change in goods and services resulting from the freedom of choice, changing both the types and quantities of human resource requirement. A second change occurs in the production mix by producers attempting to minimize their costs, thus changing both the type and quantity of human resources required. This is a process that goes on every second, every minute, every hour. American businessmen are the most efficient in the world, and I can assure you that by and large their constant dream is to have revenue approach infinity and costs approach zero. In their costs approaching zero, their concern was human resource costs or wages; probably more so than any other costs, because for most of them this is their major cost item and they are constantly concerned with it. How can I get more output from existing people through motivational means, etc?

With the majority of our society participating in the production process, they must understand the supply/demand relationships. The reason salaries of neurosurgeons are high, is not because society says neurosurgery is a great thing. The reason their salaries are high results from the supply/demand relationship. If we could produce two million neurosurgeons in the next five years, I can assure you the salary rates of neurosurgeons in this country would decrease. It is a supply/demand phenomenon; yet we find the society tries to dictate good and bad jobs. A good job is one that requires a white shirt and tie. A bad one involves a blue shirt, high-tops and

overalls. Good people are preachers, teachers, lawyers and doctors. Bad people are bricklayers, plumbers and mechanics. I have heard this all my life. Public education, or my experience with it, has done nothing to dispel that notion; life has, but public education has not. The big man in my neighborhood, the guy that sits at the top of the hill, is a plumber. He lives in the biggest house. About a week ago, as I was passing by, he was loading up the jeep on this trailer that he has to pull behind his big Chrysler Town & Country stationwagon, heading for Colorado to go hunting. He was spending a couple of weeks there. He has an $85,000 home, four automobiles, not counting his jeep; and only three people in the family can drive. As I went by I said a prayer, that some day he might have social acceptability: That he too might get to travel around the State, that he too might get into one of these monkey suits with these ties, when you have a large adam's apple, I thought too, that perhaps he might go to his grave, never having been fully socially acceptable..... This distressed me. So I rolled on to my committee meeting with an academic vice-president, knowing full well I would have to convince him of my right, and the right of my organization to exist one more time. An after thought was, he doesn't have it so bad after all. You know that thought keeps creeping up in my mind somehow. Perhaps he is not as neglected as we think.

The point is, that the market system does not understand good, bad, right, or wrong. The market system understands supply/demand relationships. For us to deal with it effectively, we must understand supply/demand relationships. We must understand that income and productivity are inextricably related, and these changes are going to come about. Ours is the most dynamic society in the world. I think we need to decide whether we are going to run it, or whether it is going to run us. The implications of the productive machine that we have created can be both for the good of the nation, and I would suggest to you, they can also be bad. Make

no mistake about it. Now we do have a problem in human resource development, that we do not have in the terms of production and consumption of other types of goods and services. There is no market relationship between the producers of human resources and the consumers of human resources. There is no market relationship between the principals and superintendents, their institutions; and the businessmen in this room. Now if we decide as a nation of consumers, that we are not going to buy Henry Ford's products, I can assure you he will get the message very quickly. However, if businessmen decide that they are not going to buy a particular school system or educational institution's products, they do not get the message as quickly. There is no market relationship there. What your needs are as businessmen and industrial leaders are not transmitted through any kind of market system to the school system.... How many people do you need, now and in the future, possessing what skills, and what possible talents? The only way that there is some possible feedback, is when a sufficient number of graduates or dropouts, from the public school system or higher education, stack up in the labor market to the point where they begin to indicate they cannot get jobs. Then and only then, do the institutions tend to slow down, but they do not necessarily begin to slow down at that point. We turned out enough Ph. D's in 1961 to probably cover the need. However, we are still turning them out. Finally, we need to consider the fact that economic satisfaction is not the whole thing. It is not the entire picture. People today, and particularly young people today, are concerned with total personal satisfaction. They are concerned with doing something that gives them a sense of creativity, a sense of being needed. Economic satisfaction is only part of that. People need leisure time. People need to feel important; to feel significant. What do you do with jobs like putting 245 wheels on a Pinto automobile 8 hours a day, 40 hours a week. Drug use among automobile production workers is extremely high as is alcoholism. We have a situation in manufacturing where we are between the use of people in the production

process, and totally automating the production process. We need to move on through that stage. We need to provide incentives to move on to the next stage. To be able to do that we need to have alternatives for those people.

Changes in job markets obviously not only require people in education and industry to change. They require people like myself, and some of the people I am training to engage in occupational projections not only at the national level or State level, but occupational projections at the community level. We need to be able to give them some idea of the kinds of jobs, in so far as possible, five to ten years down the line. This needs to happen in the classroom. Granted, that when you project these things, it is very difficult. The degree of statistical reliability loses something. However, at least it gives us some idea, and that in turn should feed back into the system.

We have no market mechanism to send the necessary signals. If we do not have one, then we need to superimpose something else. This is a communication system between businessmen and educators. We need that linkage. All of us are in the education and training business, and we had better recognize that.

On that point, I will close. Allow me to take this opportunity to tell you how much I have enjoyed being here and talking with you this morning.

"How the Local Economy Uses School Products"

Marvin Brown, Executive Secretary
Mechanical Contractor's Association of Texas

My assignment this morning is to talk to you on the use we make of the products of the school, at least that is the way I interpret the words that are here on the piece of paper.

I can tell you in a few words just exactly how we use your products. We don't! We use the people that the school system discards. Now that's kind of an indictment of the public school system, I will admit, but it's nevertheless true. Now with that as a premise, I don't think that what comes out of the public schools is worth shootin!

I'd like to fill you in on my personal background that may explain some of the bias that permits a statement like that and also tell you what we, as an association, do about it.

Very briefly, I am an educated person---if you call going to Texas A&M educated. I've also been to the University of Texas. I've also been through Rice. I've also passed through Columbia and any number of things. All I'm trying to document is that I have a pedigree. It doesn't help much. I also have, and I think the most valuable tool in my kit, a master plumber's license. This enables me to earn a living. I would also tell you that the association I work for is the Mechanical Contractor's Association of Texas and these are employers of Union plumbers and pipefitters. So I'm beginning to narrow down the field that I represent rather dramatically.

I would like you to consider for a moment, what a member of the construction industry such as I hold myself to be, has to say as representing the third largest employer in the United States.....first being the U. S. Government, second being the automotive industry, and third construction. I'd like to

document the number of people that we will use in this way. And that is, that by the year 2000, we estimate that everything that exists today is going to have to be rebuilt --- duplicated. That is, every apartment house, every washateria, every service station, every school building, every office building is going to have to be built again. That's the immensity of the work that is before us.

I also recognize that most school people feel that in order to do that kind of work you don't need much. They're wrong. As a plumber I recognize the fact that all you need to know is that water runs down hill and payday comes on Friday. If you can keep those two fundamental facts in mind you can be a success in my field. Now in addition to that it helps if you know a little about hydraulics, thermodynamics, surveying, chemistry, physics, and have a little skill in your hands. All these things are helpful to you, too. Yet the people in the school system have made a terribly big point of telling people whom we employ that our work is not sophisticated and it is unskilled and kid you ain't got it, so why don't you be a craftsman or a plumber. I'm up here and you're out there, so I can say to you, I resent this. _____ the people with a white collar and the clean hands and all the education and who are making every bit of 9,000 dollars a year, are telling my jobbers who make a minimum of 7 dollars an hour on 2,000 hours a year, which is 14 grand anyway you slice it, who drive two automobiles and have a boat in the driveway, and who may be building a cabin on the lake, and who can take two weeks paid vacation every year, that they ain't sophisticated. They ain't got it. I submit to you that there may be something wrong in the attitude of the people who are doing the counseling. Again it is personal prejudice but I was taught a long time ago, that those who can do, those who can't, teach; those that can't teach, teach teachers; and those who can't teach teachers, counsel others.

Now that very quickly and very sketchily is the problem.

We are an organization of employers. You are our source of manpower and you're turning out a product that we do not and cannot use. We have to train them ourselves. For this reason we went to Texas Education Agency and we said to John Guemple, "Hey John, we have a problem. We have a real good industry. We readily admit that it's not the most romantic thing to have to purify the air, to recycle water, do dispose of garbage, and to dispose of sewage and make it useable again. We know that everybody would like to be an airline hostess. But we want some guys who are willing to work and to work hard and make alot of money while they do it." Now if there is something wrong with this concept, I want you people to tell me what it is. So John said, "Just exactly what do you want to do?" We would like to have a high school program if you please, which is what we called it at that time. We didn't know, we were just looking for a name. We want people to prepare for a career in plumbing and pipe fitting and it turns out that the "in" word that day was career education and we happened to hit it. We wanted to take a kid and teach him how to be productive, how to be successful, and if you please, how to obtain a goal and make some money while he was doing it and incidentally help us solve a problem.

The problem that we had to solve was simply this -- recreate everything that exists in the United States today in the next 25 years -- that's no small task. People are being discouraged from doing this type of work from the educational system and so we had to make a special effort in order to train him. You say "Well, you guys represent a union, you have got a five year apprentice program. This is designed to knock everybody out except for those you want to hand-pick." Bolognal We can't get enough people to apply for apprenticeship to give us any selection. Too, when a person comes to us and we are going to consider him for

apprentice material, we learn to guarantee that guy employment for five years. How many of you have five year contracts at 14 grand a year? Yet under such ideal conditions we can't get people and so even in our apprentice program we are bringing people along very fast, very rapidly. We have doubled our output in Texas. I have been in the business for six years and we have doubled our output since I came and we now have a grand total of, would you believe, almost 3,000 people in the program and I resell it. People, that is just not enough, but it is all we can do, especially when the education system keeps telling us "You don't want to do that. Get you a white collar job such as counseling other people like I do."

We, with John Guemple's assistance, Elton Thomas' assistance, and Dr. Boone's assistance, created a program which is not in 1,000 schools in Texas in grades 9, 10, 11, and 12. The purpose of the program is to introduce kids to the real way of making a living. First year is indoctrination: 10 and 11 grades. We are teaching plumbing, piping, refrigeration, air conditioning, and sheet metal work and all of these things are trade names that are recognized. But what many people apparently do not want to recognize is the fact that we need people who are skilled in mathematics, physics, chemistry, thermal dynamics, and hydraulics. We need people who understand percentages and who can use a ruler and can measure things. The product that is coming out of the school can't even use a ruler. How many of you can divide by 12 very quickly and come up with an intelligent number? These are the kind of skills that we need and we are working with Mr. Guemple to provide. Our 12th grade program is go to school half a day and our guys put them to work the other half-a-day. Admittedly, I will tell you we are now in the 4th year of the program and we are going to find out whether this idea works or not. Mr. Guemple was good enough to give us 4 years. We are now in grade 12 in our locations and we've got about 600 or 700 kids who are in a cooperative venture with us.

I will have to let you know at this time next year whether or not any of them turn out and enter our business.

I will tell you what gave me an inkling that we are on the road to success. Down in McAllen, Texas, there is a wonderful guy that teaches our plumbing apprentices there and he believes in people learning something and being able to accomplish something - a unique teacher. Three of his 10th grade plumbing students came into the Texas State Plumbing Board to take the examination for Master and Journeyman plumber. Now this is an extremely difficult exam. It only took me, with a graduate degree, two years in the trade, and a two week concentrated course in mental skills to be able to do it myself. These three 10th grade kids went up here and took the exam and passed it. You know what the problem is with these kids who have got 20 years jump on me? --keeping them in school -- because they could earn alot of money, earning a living, being productive instead of sitting in class. Those kids are capable of production, self satisfaction, and making a contribution to the economy. They are tax payers and not tax eaters.

I will give you one other example. This is the problem that we are having. It is very real, but nevertheless it points to the fact to me that we are on the right track. In San Antonio, we had a class of 10 kids who were one year advanced in the whole program. Last year was their 12 grade co-op program so we put them to work on the half day basis. One of our guys who likes to make a buck a little dishonestly (sometimes he shaded the truth a little bit) sent the kids by themselves without any supervision at all out to Kelly Air Force Base to do some work. He said he didn't have enough manpower to send with them. It was an emergency call and somebody had to do the work. The kids did the work and not only that, but the inspector at the base came by to check the work and he said, "What are you two guys doing?" He said, "That is the

best work I have seen." He said, "Have you two kids been working steady?" They said, "No, we were sent out." He said, "I will tell you what, I will start you right now on the maintenance force of the base at a beginning salary of $3.20 an hour." This is the kind of people that you can turn out of a school system if we are asked to find a career for you.

We're happy as an industry, as an association, to make some attempt to help direct the input of what talents we require. We aren't hostile to you guys, really we aren't. It's just that we don't think you know what you are doing.

"How, Where, and When People Get Trained"

Dr. Ray Marshall, Chairman
University of Texas Economics Department

Before addressing my assigned topic, "How and Where People Get Trained," I would like to discuss the prevailing bias against workers, which seems to me to be a very serious problem affecting our skilled labor supply. This bias is not restricted to the schools, of course, because it pervades society. This bias is based on the assumption that those who work mainly with their hands are somehow inferior people or are in occupations requiring little education or training. This anti-worker attitude manifests itself in a variety of forms. Newspaper writers and editors exhibit this bias when they decry the high wages paid to, say, plumbers and imply that the natural order of things somehow has been violated when plumbers earn more than white-collar workers. The logical response to such an assertion is, why shouldn't plumbers make more than white-collar workers? Compensation is a response mainly to demand and supply, which pay little attention to the status accorded to occupations. Indeed, I suspect that we are entering an era of oversupply of white-collar workers who want to obtain "prestige" or clean jobs and an undersupply of people who want to do the dirty work. A dramatic narrowing of the gap and an inversion of the relationships between manual and white-collar occupations in the next two decades would therefore not be at all surprising; the compensation for many manual occupations is likely to rise relative to easier white-collar occupations. The greatest gains are

likely to be made in the craftsman categories in short supply and the hard, dirty jobs that traditionally have paid very low wages. Workers in the latter category are likely to be in short supply, because fewer and fewer workers will be compelled by economic necessity to take these jobs.

Anti-worker biases also are expressed in other ways. Intellectuals in academia, as well as popular writers, are quick to criticize as excessive the length of time required by various apprenticeship programs, when they actually know very little about these trades. "Why," a reporter asked President George Meany of the AFL-CIO,at a national press conference I attended, "can the U.S. Air Force train a pilot in two years, while it takes four years to complete a plumber's apprenticeship?" As I recall, Meany's response was that a plumber had to know more than a pilot and went on to explain what few intellectuals realize: an apprentice works at his job while learning his trade.

The society's anti-worker bias carries over into the school system, with what seem to me to be unfortunate consequences for education and human resource development. For example, many academics exhibit strong class biases against "vocational" subjects as somehow inferior and less "pure" than "academic" subjects. As a consequence, we interpret successful and good students as those who meet our expectations of qualifying for the next higher level of education. We therefore establish success criteria and expectations that all of the "good" students are those destined for college and graduate or professional school and the "poor" students as those destined for manual occupations and vocational tracks. We interpret vocational programs as low status and consequently too often use them as dumping grounds for "poor"

students we interpret to be unqualified for the academic track. We therefore achieve a self-fulfilling prophecy. We channel "poor" students into vocational programs where little is expected of them, and we assign vocational education second class status within the academic community.

Vocational education also has too often been divorced from the world of work, partly because training has been considered "academic" and unrelated to the real world. Vocational training facilities therefore have too often been antiquated, and vocational programs have not been given sufficient support and incentive to become more relevant.

This separation between vocational and academic education is unreal and unfortunate and becomes increasingly more unwise as work becomes technically more sophisticated. Experience with progressive vocational or technical programs makes it clear that for many students, skills and theoretical training can be more effectively provided through vocational subjects than through abstract teaching or isolated skill training alone. Education is, or should be, <u>trained intelligence</u>, and this can be done effectively with concrete vocational training which incorporates skill acquisition and computative and communications abilities in one process.

However, effective vocational or career education requires attention to measures to combat this anti-manual worker bias in the schools and in society. There are many ways this might be done, but making vocational education open-ended would help. Under present arrangements, workers too often find themselves in occupations with limited upward mobility, causing them to be cut off from the so-called "higher"

occupations. In other words, carpenters have limited opportunities to become engineers or architects, which requires more formal education. An open-ended system might make this opportunity available to workers who wanted to avail themselves of it. Of course, many skilled workers have opportunities to become foremen and supervisors but have limited opportunities to move into related occupations.

A promising way to close the gap between education and work is "start-up" training, currently being considered in Texas. This idea apparently has demonstrated its effectiveness in the Carolinas, Virginia, and Alabama. Start-up training is designed to close the gap too often found between training and jobs by making job creation and training parts of the same process. Industrial developers have found that manpower uncertainties are important obstacles to the attraction of industry. Prospective employers therefore attempt to minimize their personnel risks by locating in places with manpower surpluses and hiring workers who are overqualified for the jobs available. Ordinarily, new industries therefore provide only marginal jobs for workers, especially in rural areas. Start-up training is used to guarantee employers workers to meet whatever requirements they impose. Sometimes the state training programs use the companies' supervisors or trainers, thus ensuring that the training meets specific requirements. Start-up training thus provides better jobs for workers and better workers for jobs.

But start-up training is not widespread. There are a number of other ways most workers get their training. The most significant formal training process is <u>general education</u>. General education often is

overlooked as a skill training process because we ordinarily separate "vocational" and academic training. But most employers probably are more concerned with workers who have trained intelligence and communication and computation skills and who are disciplined to meet work schedules than they are with specific skill training. Indeed, most employers apparently wish to conduct their own training for specific job skills.

The job component of general education is currently being challenged. There was a time when it was taken for granted that more general education caused workers to be more productive and therefore led to higher incomes. Indeed, it is well known that persons with higher levels of education generally have higher incomes than people with lower levels of education, so that the values of higher education can be calculated. Critics point out, however, that statistical correlations between income and education tell us very little about cause and effect: are people rich because they are educated, or are they educated because they are rich? Statistical correlations support both conclusions.

There have been many sophisticated, and not so sophisticated, studies of this problem in recent years, and we are likely to see many more such studies as the costs of education rise and policy makers question its value. My own view of this matter is based on several basic assumptions and conclusions drawn from studies in this area. The question of the relationship between education and productivity will never be proved or disproved with mathematical precision. The best techniques available to social scientists fall far short of perfection in terms of conclusive proof. However, we can present better evidence

than is often done and make strong cases for particular positions. When this is done, there is strong evidence that education does contribute to productivity, especially the best kinds of education, which create "trained intelligence." Clearly, however, it is a mistake either to assume that each year of education has the same effect as the preceding one or that a year of education in fine arts has the same impact on productivity as a year of engineering. Similarly, the quality of education varies through time, so that the impact of a year of 1972 education is not the same as that of a year of 1943 education. The quality differential seems to be particularly important for minority groups. It seems to me that there is a great danger in arguing that minorities are not likely to be able to improve their positions through education on the basis of studies which either (1) are based on past experience (as they all are) or (2) merely demonstrate that we cannot prove conclusively that education does have a beneficial effect. I find all of these arguments dangerous and unconvincing. People can improve their condition through education, although education systems need to be improved, especially as concerns preparation for work.

There seems to be a special need to improve vocational education by making it more relevant to job requirements and elevating its status in the society and the academic community. We must attack the idea that there is some inevitable conflict between knowing and doing.

In addition to general and vocational education, people get trained for work through apprenticeships, in on-the-job training (OJT) in the military, and through special programs like those provided by

the Manpower Development and Training Act of 1969. OJT is a very popular and effective way to acquire job skills and apparently is the way most people get their job training. However, many subjects, particularly those requiring a mastery of mathematics or other abstractions, often cannot be taught very effectively on the job because they involve "invisible" theoretical concepts, more amenable to classroom instruction. Apprenticeship programs, which currently involve only about 300,000 workers, are a good form of training because they involve simultaneous mastery of manual skills and related academic instruction. Apprenticeship is particularly important in crafts where the work is not standardized or routine and the worker must understand the theory of his trade in order to adapt to changing circumstances. A study currently being completed under my direction at the Center for the Study of Human Resources, University of Texas, demonstrates fairly conclusively that journeymen in the construction industry who have served apprenticeships have higher and more stable earnings than journeymen who learned their crafts by other means.

Although many people in the United States have received military training, very few people make extensive use of their military training in civilian occupations. For example, a 1964 study found that only 10 percent of veterans over 35 years of age made any significant use of their military training in civilian occupations.

Training under the MDTA has become very controversial and therefore deserves special attention here. Some critics argue that these programs have failed because they did not make a significant impact on unemployment during the 1960's and did not do much to greatly

improve the employability and earnings of their participants. These critics reflect considerable confusion about the nature of these manpower programs. In the first place, they often assume that job training was the only component of manpower programs, whereas, besides training, these programs also include pre-employment indoctrination and supportive services for adults and youths with limited labor market experience; public employment programs to provide jobs for people who are not likely to become employed in the private sector as a result of general monetary-fiscal policies alone without intolerable levels of inflation; and various measures (improved information systems, worker relocation, etc.) to improve the operation of the labor market.

There also is some confusion over the objectives of these programs, a confusion created by a multiplicity of Congressionally-assigned objectives and a tendency to oversell manpower as a cure-all during the early 1960's. Few, if any, manpower specialists ever thought that manpower programs alone would do much to reduce unemployment; it was hoped that effective manpower programs would improve the operation of labor markets and therefore make it possible for general labor market policies to reduce unemployment at lower rates of inflation. Similarly, most specialists realized that the small size of manpower programs relative to their target populations (they generally reached less than 10 percent of their target population) precluded any extensive aggregate impact on employment.

However, there are some general consensus opinions among those who have studied manpower programs carefully:

(1) The performance of various programs was mixed (some good and some bad), as might be expected with experimental programs.

(2) The delivery systems left much to be desired -- there were too many programs conducted by too many agencies, with consequent waste, duplication, and inefficiency.

(3) The programs generally had very favorable benefit-cost ratios (although the state of benefit-cost study technology leaves much to be desired).

(4) Most of the million people who got jobs as a result of MDTA training found that the programs improved their earnings and employability as compared with people with similar characteristics who did not go through the programs.

(5) The public employment programs were particularly effective in reducing unemployment, although the total impact was limited by the small size of the programs.

In short, although manpower programs encountered many problems, they were, on the whole, successful enough to provide considerable insight into manpower problems and become an accepted part of economic policy.

"How, Where, and When People Get Trained"

Dr. J. Earl Williams, Director - Center of Human Resources, University of Houston
Manpower and Vocational Education

Vernon McGee in his introduction of me at this meeting has just demonstrated something which I think is relevant to my topic of how we can learn more about vocational education and training. I have known Mr. McGee for a long time, and I want to go on record as saying I think that he is one of the most wily, astute, and frankly poker-faced bureaucrats that I have ever had the privilege of knowing. Now I mean all of that as a compliment.

I can remember going into his office on numerous occasions when he was serving as top assistant to Governor Preston Smith, and our conversations were generally about the need for coordinating all the manpower programs, the need for developing what I called a human resource umbrella agency, the need for extensive career education--these sorts of things. Usually, I would get the nastiest questions from Mr. McGee that you could imagine. In fact, you would think that he didn't believe a thing I was saying, and that he was simply raising questions to be perverse. Now, I was a little suspicious that this simply couldn't be the case--after all, his reputation and his intellect were well known to me--but, you know that you often have to keep yourself pessimistic and optimistic at the same time. So, I would argue back with him just as hard as I could, giving him all the facts to support my argument, and I would leave, never knowing if I had made a dent or not.

A short time after he left the Governor's office, I happened to hear him make a public speech--I have heard him on a number of occasions since then--in which he made an impassioned plea for the very type of umbrella agency on manpower which I had outlined to him. I have also heard him give a very good pitch on the need for extended career education.

So, my opinion of Mr. McGee is that he is the kind of fellow who is probably with you all along, but wants you to be so much for your own project and your own ideas that you will tell him all you know about it; then, he will add your new ideas to the rest of his knowledge on the subject to give you the support you have been wanting from him. I might add that he certainly has shown himself to be one of the most knowledgeable people I have ever found in public service, and I have dealt the with men in government at all levels for most of my adult life.

Thank you, Mr. McGee, for your kind comments. We can all learn more about vocational education by listening to each other's experiences and ideas, and then adding them to our own.

At the Center for Human Resources at the University of Houston, we relate in a number of different ways to vocational education and training. First of all, we work closely with the Texas Education Agency in the work that it does for vocational training. Then, many of our projects are related to the different facets of vocational education. Quickly, one was a research project on vocational guidance, and along with that one were a number of other projects conducted jointly with the Division of Occupational Research and Development in TEA. We have also started to evaluate the career education projects in the first three schools which received grants. We have been working on a project concerning the handicapped students who take vocational education, and there is still another project on the experience of the Mexican American who takes, or tries to take, vocational education.

All of this lets you know why I and my staff at the Center for Human Resources feel we are really part of the vocational education family, and that we are not members who joined the family just recently. We have been here long enough to

get to know the other members of the family pretty well. We understand what one another is saying, what each one is trying to do: we can communicate. You know how it is when you don't hear too well. For instance, it reminds me of the three little old ladies on the city bus. The first one turns to the second and said, "Windy today, ain't it?" The second one said, "It ain't Wednesday, it's Thursday." The third one hops up from her seat, saying, "Third Street! Stop the bus! That's where I get off." So you do have to listen very carefully, or you might get it a little bit wrong. When you work together long enough, there is less chance of getting it wrong.

Let's start by thinking about education or educational training. You hear those words "education" and then "training". Most people really think of of two entirely different things with these two words.

"Education" brings to mind something like liberal arts studies, or the college preparatory work done in high schools. When you hear someone speak of getting a "general education," you usually assume that he is taking those courses which are not aimed at giving him any particular skill for any particular vocation. Some people say he is taking an "academic education," implying that it is good for the mind, probably enriches his life, but is also probably useless once he gets out of school. Indeed, the student may work hard and make high grades, but he is likely to still be an unskilled worker if he enters the labor force with nothing more than just such an education. There are exceptions to this in some cases, of course, but when the terms "education" or "general education" or "academic education" are used, it is usually assumed that something additional will have to be learned before the student will be able to earn a living. He is simply prepared for additional education in a more specialized area.

"Training," on the other hand, is the term used when the educational objective

is to give the person a specific skill or skills which must be mastered if the course of study is to be completed successfully. Now, "training" is also a term which can get mixed up; sometimes it is called "vocational education," "occupational education," "skill training," and so forth. But my point here is that "education" and "training"--with whatever additional words that may be added to them or substituted for them--are thought of as separate entities by a lot of people.

I have always been bothered by these terms, and by those persons who define one as "training" and one as "education." Part of the reason it bothers me so is my long-time concern for the need for vocational education programs. As educators, we have generally ignored what was needed. Instead, what we have done for a long time in the educational system is to prepare people along an educational ladder. They are prepared at the elementary level for the secondary level, at the secondary level to enter college, at the college level for entering graduate school to earn that Master's Degree, and then most of the work done at the Master's level is preparatory to what will be expected in the Ph. D. program. In a sense, you might say that vocational education doesn't start in a lot of fields until one got the Ph. D. program. At that point, you got the training you needed for your occupation or skill. Of course, lots of people dropped out before that point, but everyone understood that ultimate success was in attaining the Ph. D. degree.

We have often been rather smug in our educational system. Some of us have leaned back in a complacent way, saying in effect, "Boy, we really have got it made in the educational field. No one is going anywhere without an education--and we run that." We are, you know, part of the largest occupational group in today's American labor force. Let me show you, quickly, how our labor force has changed in recent years.

In 1900, the agricultural workers made up the largest occupational group. We were a nation of farmers, generally speaking. Then, up to 1940, it shifted to industry. The blue-collar man who was skilled or semi-skilled and who worked on an assembly line took over as the typical American worker. But there has been a startling change since World War II. By 1970, the knowledge worker was in the largest occupational group. What might be called the education establishment included more than two-million elementary and secondary teachers in our 80,000 public schools, and more than 500,000 teachers in our 2,200 colleges and universities. And there are about twenty new colleges still being developed and opened each and every year even at the present time. All of this growth has contributed to the educators' smugness, for one might make the argument that we have grown because we were so good. I think, however, that before we get too smug in thinking we have it made, we had better look a little closer at training as opposed to education, and that is the topic I am primarily interested in today.

It is important to recall how "training" got started, how our educational system has traditionally related to it (or not related, as the case may be), how and where people are getting their training, and how we, as educators, can fit into the programs.

Let's start with the educational system and with vocational education, particularly since most of you here today are familiar with the history. Primarily during World War I and again during World War II, we had some critical skill shortages, and various ideas were developed about how much good it would do our nation and individual workers to have technical training, occupational skills, and so on. Therefore for a number of reasons, we passed in 1917 the Smith-Hughes Act, and the Federal government put in $7-million to start with. Every year, we were supposed to get another $7-million to train people in vocational education.

We had not done anything like that before, but the general idea was that we would be training people at the high school level for a specific occupation, and they would be prepared for the work force they were going into after they graduated. At that time, we were still thinking of ourselves as a nation of farmers, and certainly the kind of Congress we had at that time was placing heavy emphasis on agriculture. Vocational agriculture for men and homemaking for women was about as visionary as we could get, so that is how we trained them. Practically no attention was paid to teaching the industrial and other skills which had already begun to be needed by our growing economy. Perhaps the emphasis on agriculture still did make sense in 1917 when the Smith-Hughes Act was written and passed, but whether or not it did, that is the way we started. What doesn't make sense is that we continued in the same manner. We have had a series of other acts and amendments through the years, and a lot of these have continued to add still more in the agriculture and homemaking column. We have expanded some into distributive education--what we call DE--and we give some guidance or counseling about various vocations and so forth, but for the most part, vocational education remained like it started up until the time that we found ourselves in a crisis--what we call the manpower crisis of the 1960's.

Some of these other acts and amendments need to be mentioned before I go on. One was the Vocational Rehabilitation Act passed in 1920. As you can easily surmise, this passed largely because, after World War I, there were a lot of returning veterans who had injuries, or who had been wounded, and some others who had various disabilities. The Workmans's Compensation Program couldn't take care of these problems in most states, and there was a general feeling across the nation that these people ought to be rehabilitated back into our labor force.

I think that the purpose spelled out in the Vocational Rehabilitation Act is very important even today when we think in terms of education and training.

The purpose stated in that Act was to guarantee vocational rehabilitation services to the disabled or handicapped individual in order to render him fit to engage in gainful occupations which were commensurate with his overall maximum potential. Anyone with a disability was, therefore, to be trained--or rehabilitated--so that he could get into the labor force without difficulty, and so that he would remain there. He would be prepared to work to the maximum of his capacity. By the broadening of definitions, certain slight changes were made in later years. But up until the crisis of the 1960's, the approach did not really change all that much, and I think this is one reason "training" was put into the pot as background.

The next important event certainly would be the Wagner-Peyser Act in 1933. As you know, this was not a training act, but it did establish something which was badly needed--a nationwide employment system. The U. S. Employment Service came into being through this Act, and our Texas Employment Commission is actually a part of that overall organization. Through the years, the states' various employment commissions have had thrown on them a lot of different kinds of people with whom they were supposed to work or to help: the handicapped from birth and from accidents, the older workers, the returning veterans, and just about any kind of person who might have employment problems. They have had to handle certain phases of welfare from the very beginning, too. Generally speaking, however, those concerned with employment security looked at their jobs somewhat like this: whatever the educational system turned out was its business; it wasn't the concern of the employment commission. The system turned them out, and the commission tried to place them. Employment security agencies looked at whatever jobs there were, and at the people wanting work, and if they matched, that was good. It was a labor exchange; many people called it an example of the law of supply and demand. Now of course, if the

jobs and the people didn't match, that was tough. And no one really thought too much about why they didn't match, or that perhaps things should be planned so they would match. As late as during the 1950's, it was as if there were two stacks--one of people, one of jobs--to be shuffled together. Whatever number of people and jobs dropped out during the shuffle were generally disregarded. The unemployed were not qualified to train for the available jobs, in many instances. Although I think we can honestly say that some of our Texas Employment Commission people were ahead of the rest of the country in this regard, even in Texas this is how the system generally worked up to the time we hit our manpower crisis in the 1960's.

Another act passed in 1937, the National Apprenticeship Act. I think many of you are familiar with this one. Primarily, the labor organizations were the first who pressed for its passage, but employers wanted it also to prevent shortages of the skilled workers they needed. The Bureau of Apprenticeship and Training was established to work with labor and management in setting up formal apprenticeship training programs, in helping them establish standards, and so forth. While this was an important idea, the number being trained in the program was relatively small. Not a lot of money was designated for the U. S. Department of Labor to oversee the program, so it was not as effective as it could have been.

With these several acts and amendments, we came into the 1960's and its manpower crisis with far less than adequate preparation for the problems we were going to face. Generally throughout the world, but specifically in the United States, we have moved during this century at an ever-accelerating rate through the three phases of technological change.

Did you realize that the three major changes in our technological way of doing

things have all occurred in less than a century? Most of the change has occurred during our own lifetime. The first phase was the mechanical one, and in the U. S., this might best be epitomized by something like the old corn mill where the waterwheel turned to grind the corn which had been brought by the farmer in his wagon. We had that stage of mechanical development for a long time. During the early part of this century, we began to move into the second phase. This was the mass production with an assembly line, generally conceived in American thought as having been started by Henry Ford. Ford didn't invent the assembly line, but he did know how to use it; and, as a consequence, Americans became very proficient, and we were known around the world for our ability to produce. We got credit for starting the second phase of mass production and assembly lines as a worker's way of life in all the industrialized nations. During the late 1950's--and more and more in each year since then--we have moved into the third stage, automation. To see best the distinction between the second and the third phases, let me give you some of my shorthand terminology. During the second phase, men ran machines; during the third phase, machines are running machines. When you reduce it to these simple terms, it is easy to see what some of our problems are going to be.

First, let us think in terms of employment. For a number of years now--probably at least a decade--we have been able to turn out the same amount of goods and services each year as we had the previous year, but with two to four million fewer workers. We continue to turn out more goods with fewer people. Technology has also changed even the kind of society we have. The pre-1950 labor force in the United States was essentially that of the blue-collar, skilled or semi-skilled worker. By the mid-1950's, we had as many white-collar workers as we had blue-collar; and by the 1960's, the white-collar

worker was well ahead of the blue-collar worker numerically. Today, two workers out of every three are white-collar, performing a service rather than helping to produce. It is estimated that well before this century is over, we will be down to only 10 or 15 percent of all the workers who will produce all the goods for the other 85 to 90 percent. This is the direction in which we are moving, and whether or not we slow down or move faster is not as significant as the ultimate result. Our labor force is changing from one which was dominated by production workers to one which will be dominated by service workers.

One interesting fact keeps recurring to me as I talk to you. Did you know that 90 percent of all the research scientists who have ever lived in the history of the world are still alive today? In the United States, more than 50 percent of all the money spent on research and development in our entire history has been spent just in the 1960's. We are not slowing down, we are actually speeding up.

What does all this mean in terms of the labor force, generally? First of all, we know that from 1947 to 1970, the greatest increases in the labor force were in the categories of government and services. There was an increase of 138% in these two. The list then shows trade and several other categories before it gives the modest 20 percent increase in the manufacturing of goods. Of course, anyone will tell you that quoting selected figures can be misleading, so let me point out that manufacturing is still the largest category, but it has dropped in its percentage of the total, and it is continuing to drop annually while government and services are categories which are increasing more and more.

From the occupational standpoint, you see much of the same situation. White-

collar workers increased by well over 40 percent from 1958 to 1971. Of this, the largest group was the professional and technical workers. Sometimes, we fail to remember that we are talking about a lot more technical people than some might realize. An ever-increasing number of technicians are needed, and too few schools and colleges are turning out the kinds of technicians we need. This is one of the fastest growing categories today, and it is going to continue to grow. Let me add, as an aside, that I think our College of Technology at the Univeristy of Houston is one of the few which is trying to train technicians in a realistic, employable manner. The white-collar professional, technical, and service categories are all increasing, and everything indicates this will be the case all during the 1970's.

What has this done to education, and what kind of pressure has it put on education? Some of our other speakers will deal with this more specifically later in the conference, and some of you are quite familiar with the facts, too. I think all of us will agree that more education is needed for all workers in the American labor force, but <u>different</u> kinds of education are needed by the different segments of that labor force. "More education" doesn't automatically mean that everybody is going to need four years of college. Earlier this morning, my friend Lewis M. Abernathy from North Texas State University said that as late as 1980--and that's not 1970, but 1980--we will still need less than 20 percent of our workers to have had as much as four years of college. This doesn't mean that students will only need what they can get in the current high school programs, for they will need technical knowledge such as could be learned in two years of college, at a technical skill school, or at a community college. Here is one big explanation for our trying to develop our community colleges, since our

need for this type of educational facility is great. We have not been able to change our emphasis in goals for education fast enough to keep up with the problems facing us in our changing society. Also, our educational system has not been oriented so that it is prepared automatically for changes as they come along, nor is it ready now for those which we know are just ahead of us. In the early 1960's, there were very few technical oriented colleges, and the community college had not come into its own. We know we still do not have enough of either of these two facilities, but just think what it was like only ten years ago!

When the manpower crisis occurred in the 1960's, we also began a whole series of new legislative acts, most of which you are familiar with, but we should mention them, if only to see where we stand today.

First of all, there was the Manpower Development Training Act of 1962. Many of you know the precedents set with the MDTA in terms of training allowances, subsistence, basic education, on-the-job contracts with employers, part-time job possibilities, mobility assistance--all kinds of things which were innovative first started with this Act. Also, it brought together those who were concerned with employment security and vocational education. They had to work together whether they liked it or not. A funny thing happened: they came to know one another, and they began to understand each other's problems. They became pretty good friends, and they found they had a lot in common to contribute. This situation repeated itself all over the country, and the result might have been one of the greatest contributions gained by the MDTA.

There were the Vocational Education Amendments in 1963 and 1968 which I can summarize as Congress's way of stating that too much emphasis had been placed on agriculture and homemaking. Now VE was to put its attention to teaching

those skills which were needed. The amendments in 1963 pointed out the problem and suggested some shifting, but those in 1968 put the teeth into the law so the changes had to be made. It became possible for schools to develop all kinds of co-op programs, to set up post-high school training, and to serve those groups which had never before been able to get the help they needed. Some looked on the 1968 amendments almost as a blank check to do whatever was needed for vocational education; but the money was slow in coming, simply because the National Advisory Committee on Vocational Education said that the job set as the goal by the 1963 amendments hadn't been completed yet.

"Until you get caught up with what we asked for in 1963, you can wait for the money promised in the 1968 amendments," the message seemed to be. But the mechanism was there, the tools were available in the law, and it was just a matter of changing the emphasis within the school system. Once we showed we knew what we were doing, and were going to work to accomplish the goals, more money was available.

Next, the Office of Economic Opportunity. I always like to talk about the OEO since I spent a year and a half as the Director of the Manpower Division in Washington, D. C., when the agency was just starting. It really is a unique experience to be in at the beginning of an agency. We had no guidelines on what to do, there was a lot of money to spend but no one was sure where it would do the most good, we weren't sure who was to train whom, and no one had any idea of how much training it would take. I recall that we didn't have many people in our little Manpower Division, and we weren't even sure whether "manpower" was to be spelled as one word or two. Yet, in that first year, we put about $120-million into manpower training programs for the OEO. I feel very fortunate to have been in on the planning and developing of some programs which are the heart of our government manpower training. Let me just mention

a few that started up about that time: Headstart, Job Corps, Neighborhood Youth Corps, Upward Bound, Adult Basic Education, Work-Study, Work Experience, Special Impact, Operation Mainstream, and New Careers. Later on, there were several other programs such as the WIN Program, the STEP Program, and the Public Service Careers. What is especially interesting is that every one of these programs trains people, yet most of them are not in the vocational education system as we think of it; some, yes, but most of them, no.

In vocational rehabilitation, I could go into great detail about how much money is spent, and about how many more people are being rehabilitated and trained each and every year. There isn't time, but I do want to mention two optimistic points. By 1975, vocational rehabilitation should be available to everyone who wants it or needs it. Those who need to apply should also have a lot better idea of what is available, for there is an ever-increasing effort being made to tell about the services. Another thing is that there is a much broader definition of "handicapped" being used, and this allows some people to receive help who previously were denied.

The Apprenticeship Program is one which is on the ball. In the years 1964-1970, the annual registration has almost doubled, going from 60,000 to 109,000. The total of those who completed courses moved up from about 25,000 to 45,000, representing an 80 percent increase in the number of graduates. In 1964, there were about 160,000 enrolled in formal apprenticeship training programs, and in 1970, there were over 280,000. It has continued to increase since then, too.

Also, keep in mind that this does not represent all the people who get some kind of apprenticeship training. A recent study has shown us that 60 percent of all workers employed in the skills with apprenticeship programs never did get any formal apprenticeship training; instead, they just got what is called

informal training. But they did get trained, and with that training, they were able to get the same kind of jobs that the other 40 percent got after spending several years in apprenticeship programs. So, even though we do have a number of such programs, only a minority of the people get their training that way.

For a minute, let's look at business, and at some of the formal and informal training that is given there. Approximately half of all the companies in America have some kind of employee training plan, and they do it on their own, without going to the government for money to do it. Most companies that have as many as 5,000 employees train their own people all the time. They pay for it, and some train after hours, but others make it part of the workday. A lot of them have gone far beyond those guidelines set when President Johnson was encouraging the development of the National Alliance for Businessmen, headed by Henry Ford, II. The NAB agreed to find a way to take the hard-core unemployed who had been bypassed in the job market, and to find ways for on-the-job training in their companies. The JOBS Program was a result of this effort. From 1969-1971, about 230,000 hard-core unemployed people were trained and placed into jobs in just this manner. Employers received about $600-million in Federal funds to help pay for the training programs, but we must also remember that a majority of the employers refused to take any money from the government for this. Most of them set up their own programs, trained the people, and hired most of them, all on their own, once the idea was presented and they saw how it could be done.

What about the unions? We could spend a lot of time talking about the training that unions do, for sometimes we forget that unions actually do train in their own skills, not only as part of the registered apprenticeship program, but also under the guidelines of the U. S. Department of Labor. In the past few years,

under the Manpower Act, labor unions have received over $104-million for training programs. Today, there are 70 labor organizations which are training people for eligibility for union jobs. Everything from running a caterpillar tractor to carpentry is taught. The work done by teamsters, steelworkers, automotive workers, and so on; there's a long list of training programs that unions are involved in. Also, unions are part of a "buddy system" with the National Alliance of Businessmen to help get people trained.

The Allied Health Manpower Act is just one example of some of the special manpower training programs. A few weeks ago, I heard a talk by one of the top men for the Health and Manpower Division of the U. S. Department of HEW. He said there were 40 pieces of legislation related to training in the health field, and about 140 separate programs that his Division was trying to coordinate.

Don't forget about the Armed Forces, and the training they do. It runs into the hundreds of millions of dollars. They train not only for the work in a particular branch of the service, but also they are trying to give some training so the skill learned can be useful back in civilian life, later on. Although, admittedly, it is still quite limited, there is some effort being made to train servicemen in the last months of their hitch for certain civilian jobs. This is an area which could be very good.

The Federal Government trains its own employees who are not service-connected; for example, consider the Department of Transportation. Everyone thinks the DOT just builds highways, or that it designates money to the states which, in turn, build highways; but they do some other things, too. For several years, they have had a significant training program which was an informal apprenticeship training program in the very best sense. It helps minorities and the hard-

core unemployed to learn to do all sorts of skilled jobs connected with the building of roads. Sometimes a union is also involved in this program. I have evaluated some of these programs in several states for the DOT, and it appears to me that they can turn out to be significant alternatives to the apprenticeship training going on in the construction industry.

Also on the list of training programs, you should include the Model Cities with its effort in many localities. In our current Houston Model City budget of $13-million, about $1,025,000 goes for training, job placement, and other allied programs. Each city has its own budget for this sort of thing under its Model City plan, and the totals are often not included in national manpower training considerations; but they also help out. Then, there are special programs such as the Appalachian Act, and the work done in sparsely populated areas by the Departments of Interior and Agriculture.

These thumbnail sketches of the varied training programs only serve to show that education and training are becoming more and more important, and that the Federal Government is putting in larger and larger amounts of money each year. Some of the latest figures I have seen are for Fiscal Year 1971 with Federal grants to education totalling more than $9.6-billion, or a 300 percent increase since 1965. Elementary and secondary education was given $3-billion with $187-million of that specifically for vocational education, or a 50 percent increase since 1965. In the higher education funds, there was $4.3-billion designated, with $763-million earmarked for vocational education. Also part of the total $9.6-billion was $2.2-billion for vocational, technical, and continuing education programs at the post-high school level. All of this would be preparing people for jobs in the labor force, and this represents a 600 percent increase since 1965. To make an even more impressive total,

remember that the manpower training administered by the U. S. Department of Labor has funds of about $1.5-billion and that another $1.3-billion is spent in training for military and other Federal jobs.

On the state level, this is the picture. Alton Ice, Executive Director for the Advisory Council for Technical-Vocational Education in Texas, has an interesting chart which indicates that at least $200-million was spent on some of the major manpower programs in Texas in one year. That figure is reached by estimating that all VE, including construction, has about $20-million, adult education ran to $9-million, manpower training and vocational rehabilitation was $28-million, the Job Corps was $16-million, and veterans' training was more than $61-million. (This chart was limited in what it considered, too, for it was difficult to identify all training services.) My own rough calculation indicates that vocational education probably got about one-fourth of the $200-million, or $50-million, and that if you added in the funds which went to various education establishments, you might say we had about a third, or probably about $70-million, of the total Federal training funds spent in Texas. What used to be a "monopoly" organization--education--simply does not get all the money for education now, and they certainly don't do all the training, either. Training as opposed to general education is becoming the most significant part of education today, and this becomes even more true when applied to vocational and technical education.

Today, there are perhaps 60 laws or amendments to laws which help us impart skills to our human resources to train them for the labor force. We desperately need to coordinate all of these efforts in an overall organization to prevent duplication, overlapping, voids and gaps, misplaced emphasis, and all sorts of things like these which could dilute our effort. Governor Preston Smith did set up the Human Resources Planning Council, and in some cities we

have developed the Manpower Area Planning Councils. We need to have a coordinating policy, however, which can also serve as a training post.

The corner stones of manpower policy is first, to create jobs; second, to train workers; and third, to match the jobs and the workers. When you look at the percentage of people served and the budget allocations I have mentioned, then you realize that academic education and vocational education located in the formal educational institutions are only small parts of the training picture in the United States right now. Education and vocational education are simply one part of manpower programs in the United States. You also have to consider the informal training that employers do, the training that unions give, the Job Corps programs, and everything else that makes up the total manpower training programs which are available.

A lot of these programs are remedial, and they were necessarily that since preventive education just wasn't built into our educational system to anticipate changes in our economy. Schools just trained students "traditionally" and then threw them out to do the best with whatever they could. People now are generally saying that education did not do its job, and we are in the process of remedial education as a result. But we know better now, and we can practice preventive education so it won't happen again, or so it won't continue to happen.

The job we have in education, especially in occupational education as I see it, is to gear our educational system to tomorrow's job opportunities. We simply have to find a way to make sure we are training and educating our people for the jobs that <u>are</u> developing, and that we are keeping in mind how many will be needed for each category, where they will be needed, what else they can do with that knowledge, and so on. Also, we have to

educate the students to accept that they may have to change jobs--that there is really nothing wrong about changing jobs during a lifetime career. One estimate given recently stated that every person going into today's labor force will change his occupation an average five or six times before he retires. That certainly indicates a lot of continuing education, and a different attitude towards continuing one's education all through adulthood. We need, as educators, to discover all the ways of training, all the needs that exist, all the reasons for training; and then we must think of new ways, new places, and learn to anticipate what will be next. That will be the key to our success in preventive education, and it will help solve the manpower crisis.

When will we know that we have solved our problems, and that the manpower crisis is over? The best indication will be when most of the training and most of the education is once again done by the educational system, when education is done only by the educational system, and when remedial education is only an archaic term of something no longer being necessary.

When education has reoriented itself--has gotten on the right track--and is training people for the development of jobs in a technological society, we will be able to be proud of the work we have done. We have had problems in education before, many times in fact; we were always able to meet the challenge. For each problem, we have had a solution. We know what needs to be done to solve the manpower problem today: accentuate the positive--preventive education! Eliminate the negative--remedial education!

"How, Where, and When People Get Trained"

Alton Ice - Executive Director
The Advisory Council for Technical-Vocational Education in Texas

Thank you Mr. McGee. It's a privilege to be here and a privilege to be introduced by one of your bosses. This doesn't happen very often. Many of the statements this morning pretty well covered the subject that was assigned to me. I would like to give you just a little different wrinkle. And I would like to go to the council's report, that we hope will be out to each of you within the next week. It was presented to the State Board on Saturday and they have this under advisement with Mr. Guemple and his staff. We subscribe to or support what is referred to as a Career Education Model and I would like to call your attention just to some basic elements in this model. One element is that the education process has to be based in the home, reinforced in the school and the community. This is very basic to our consideration of how, when, and where people get trained. Someone recently said, and perhaps Dr. Abernathy can confirm or deny this, that about 30% of the people in the work force have not had formal educational preparation for their job. I say only about 30% have had this type of preparation for the job that they are now doing. Now I didn't say that they didn't have preparation for jobs; I'm just saying that they had formal preparation for jobs that they are now doing. So this gives us some idea that perhaps some of this can be contributed to:

1. A lack of preparation.
2. To this mismatch that Dr. Abernathy mentioned earlier.

Another basic premise that has been discussed and related to you here this morning is the fact that our job is vocational-technical education, but we're just as sensitive to basic skills and employability skills. Basic skills are normally acquired through what we traditionally refer to as academic preparation. In other words reading, writing, and arithmetic. I refer to specific skills as those that we contribute to vocational-technical occupational types of activities

regardless of where they are achieved. Then employability skills I think is almost the sum total of the individual's personality and it goes into attitude and all of these type of things. So we think that you cannot separate one from the other. Certainly there are variances in quantities and emphasis in the various jobs. Some jobs require a tremendous concentration for example on specific skills, maybe a little less on basic skills. Others require a tremendously solid foundation in basic skills and maybe not as heavy in specific. All of them require employability skills. There are various directions and quantities and so forth and so on, these we need to keep in mind also. Dr. Abernathy talked about fractionalization. In our report we refer to it as "separatism" and "jurisdictionalism." As a council we think you ought to look at the individual. What does he want to do and how does he want to do it? Then the education system, home, and community responds to what he wants to do and how he wants to do it tempered with the realm of possibility. In other words like Dr. Abernathy said, "We need alot of theoretical economists but everybody can't be a theoretical economist," and we need to relate this to other worlds. We want as little unemployment and underemployment as possible. So this I think is going to force us, as we look at the individual and as we look at the sensitivity of our system, to maximum utilization of all resources. We are going to have to have all of these lines of communication that we refer to. I noticed the U. S. Chamber says, "That business and industry spend about 15 billion dollars annually in training outside of the formalized education system as we know it." Now there are all kinds and types of training covered. But this represents about 1/3 of the total expenditures in the United States for elementary and secondary education in the school settings. Our educational experience must be gained in a more realistic work situation. For example the secretary may be able to concentrate in a school setting upon shorthand, upon typing, or upon this or upon that; but maybe the thing she hasn't

learned to deal with is the ringing telephone, and thank goodness for them, but they do cause interruptions along with other things, maybe an irate boss, maybe a lack of understanding on the part of a colleague in the office or on the job. We need to move the educational levels down a bit and start building these basic realtionships in a developmental sequential manner so that as many students as possible have a cooperative realtionship while they are still in school so they don't travel a lot of dead end streets in moving from the formalized school system into the work force. Just briefly I want to mention training in some other agencies and groups. For example: The Department of Defense is one of the largest training establishments in the country. In fact Texas has more than its proportionate share of vocational-technical training in the Department of Defense with Sheppard Air Force Base and around San Antonio and other installations. A couple of years ago we dug into this and found that the Air Force spent three times as much on vocational-technical training in Texas as we do through the Agency for the same type of training. Now all of this training doesn't accrue for the Texas labor market. We found out, for example, in welding that it cost $7.50 a student contract hour, but the junior college people certainly don't get that kind of money for training a welder. I'm not saying that they should, but what I am saying is that we have got to look at where can these different preparations be most economically and effectively performed. We don't have the answers; we have some ideas, but don't have the answers. Mr. Hudson mentioned the matter of apprenticeship. Really we haven't scratched the surface on this and I think some people will say that this is one of the most effective methods of preparing people at least in certain areas. Many of us don't understand about it; we don't understand the opportunities, we don't understand what's involved and we don't understand, for example, what it means to be a journeyman. As Dr. Abernathy said, "Give everybody a Ph. D. and then let's get down to business." Our former

Chairman, Mr. Redding, who is the Vice President of Brown and Root, has said, "If we credentiallized in the construction industry like you do in education, we would have a lot of doctors of rigging." So what I am trying to get across is that there needs to be a marriage or linkage between what you are doing in the public education system, and the training that must take place outside of public schools with business and industry. They shouldn't have to do what we're supposed to be doing. We have many remedial programs that have especially come to the forefront in the recent decade: MDTA, a lot of training oriented OEO programs, and I won't take the time to enumerate all of these, but for example, you have one in Lubbock, OIC. I mention this because we have a council member that directs the OIC in Dallas. I would ask how many of you know what the OIC means? Well, Opportunities Industrialization Center. How's it funded? What's their purpose? My point is, how can you know how to link up to these established programs and maybe how do you work OIC out of business? I think we need to understand these types of things. I personally feel that we in education have the responsibility for taking a look at all the needs of all the people. But we have kind of concentrated on the specific needs of specific people and we figure that somehow everything else is going to work out all right. Well, it hasn't, as evidenced by many of these programs. Now we're going to have many programs, etc., to correct these, but the point is I think we could have fewer. The matter of productivity within our work force we think is especially critical at a time when we are being challenged, for example, by the productivity of other nations. We haven't been overtaken, but I mean we have got to concentrate on this. A lot of it lies with the worker. A lot of it is still with management. I think that we have got to help students understand the system, and perhaps they can eliminate some of these fears and anxieties. In other words do we feel challenged and threatened by technology? I recall experiences in the Air Force reserve, as we went from the old property accounting system to the computer system, there were all kinds of rumors about how many people were going to

be out of work whenever the computer arrived. Well nobody was displaced, they just had to learn to do different things different ways. And this really is what it is all about. A reshuffling and we must be responsive to those particular needs. I think Mr. McGee, in view of the time I'm going to turn it back to you. Thank you.

"A Plan for Educational Change"

Alton O. Bowen
Assistant Commissioner for Regional Education Services

Vocational education is not career education, but a vital segment of career education. Careers mean professional careers as well as vocational. All departments and divisions of the Texas Education Agency have directed their resources, money and manpower toward this top priority. As you know, the Commissioner of Education has placed this as a top priority in the U. S. Office of Education and much money is being asked for there.

Now this is not a fad with the Texas Education Agency that we are pushing today to be forgotten and discarded tomorrow. We are very serious about this and we plan to lend all the resources we have toward its implementation.

In 1972 we produced a document called "A Tentative Framework for Developing Comprehensive K-12 Career Education." Each of the superintendents has received a copy of this publication. It is not the last word certainly in career education, but it is a good framework for you to begin working with your staff on in-service training and developing programs in career education.

We are about to begin two more bulletins in addition to the Framework document. We are going to produce an awareness bulletin for elementary education where we are to make the children aware of the world of work, the dignity of work and the jobs and professions that are available.

We are going to produce a guide for the junior high school level where we will deal with exploration and experimentation in the various careers.

I think this is where the community comes in--to use the resources that are out there in the community to give the child an opportunity to see what it is that he wants to do, to see it in action, to have some on-hand experience with it.

Now we do not have the resources to simulate these models in our schools, so we are going to have to move the schools out into the business community and into the industrial community and move the industrial community, business community, parents and others into schools at various times. This is a total community act. I do not believe a school can implement a program in career education in isolation from the community.

In 1972 the U. S. Office of Education appropriated $9 million for Texas. We received a half million dollars plus $532,000 of the $9 million. Vocational education funded three school districts for piloting this concept: Harlandale, Fort Worth and Houston. These programs are in progress at this time and I think we are going to get some information that is sorely needed.

Now the Texas Education Agency, in addition to using these funds from the U. S. Office of Education, has appropriated a half million dollars to be used in the service centers. These funds were allocated on a formula basis so that the service centers could assist the school districts. Awareness conferences, such as this, are held for teachers in

developing and hopefully implementing programs in career education. Each education service center is to select at least one pilot school in its region and work with this school during the 1972-73 school year, then to select five additional pilot schools that commit themselves to begin career education in September 1973. So this will be 6 times 20 or 120 school districts that we hope by 1973 will have career education in all of its meetings and concepts involved in the school district.

We now have 28 model sites funded by vocational education in operation across the State. We have just funded, with a quarter of a million dollars, a project in Fort Worth and Arlington--a quarter of a million dollars to do two things to assess needs. Before you can address needs in any effort, you must know what those needs are; before you can write objectives for needs, you must do in-depth needs assessment. We must know where children are deficient and where they are knowledgeable in order to define objectives at all levels in all subject matter areas for use in the public schools.

Now there are many questions yet to be answered in career education. Some of you are asking what it is and how much will it cost. I can assure you that a good school superintendent is not going to support something until he knows what it is specifically--until it can be defined in terms that he can understand and until he knows something about the cost.

These are some unanswered questions that we have. We see it as redirection of the resources that we now have. There are about as many definitions of career education as you will find people that are involved in it. You will get a different definition about as often as you ask a question.

We do know this, career education is possibly the most popular password in American education today. Those for it say it is the most powerful force needed for educational change in America. They say this proudly and believe it profoundly. Those who oppose it describe it as a vicious scheme to undermine quality and to lower educational standards throughout our nation. We do know this, we should fit somewhere in between these two extremes. We know that children learn more where career education is offered. The motivation is greater; therefore, they learn more content in school where career education is now being carried on.

Career education is preparation for work that will help the child to live a full life and earn an honest living. Let me read what Ken Hoyt, one of the Nation's authorities, describes as his definition, "Career education is the total effort of public education and the community to help all individuals become familiar with the values of the work-oriented society to integrate those values into their personal value structure and to implement those values in their lives in such a way that work becomes possible, meaningful and satisfying to each individual."

I would like to spend a few minutes talking about career education and what it is about in Texas. But in the beginning, let me use Nixon's term and make it perfectly clear that we, at the State level, do not have any pat answers about what it really is. At this time we do not have a Pandora's box of simple solutions for career education. We hope to get some from the literature that is available in other states--Michigan, Ohio, and others. We hope to get some information from you

who have been assembled for these awareness conferences. We realize that to bring about any meaningful change in the life style of our schools, we are going to have to redirect the curriculum. We know this and also the value system associated with getting an education.

I would like to talk about this for just a moment. In the past four years we have watched our country grow from a nation of scattered towns and villages to a great urban culture and today we are told that 70% of the population of our nation lives in some 200 metropolitan areas. The statisticians say that by the year 2,000 this figure will rise to 90%. Along with this shift has been the change from a hog-, cotton-, cattle-raising society to an industrial society and the beginning of what some will tell us is a post-industrial society. These terms are not necessarily important, but they are implications that bring vast changes in the nature of employment and in the educational lives of our children.

Institutional relationships, like human relationships, seldom derive from a master plan or rational approach. We know that they would much rather be evolved in much the same way we have watched our school systems change since the enactment of Federal legislation. In education, we are beginning to see some of the same type of evolving processes and changes take place since the implementation of career education in the pilot endeavors that we are monitoring.

Now what I am saying is that schooling is not today what it was 10 years ago. Only a few things have remained the same in our public schools and I, too, stand indicted. One of the things that has remained essentially

the same is curriculum. Our curricula focus is still on college preparatory work--not as much as it was, but I think much more than it ought to be.

Now I am not here to criticize education, because I am now in Jerusalem, the Mecca for all the knowledge. We do not nave it there either and I want to say this very hurriedly. I do not find too much wrong with an educational system that has produced the greatest civilization that ever existed on the face of the earth. I think the public schools can take credit for some of the advancement in this great society.

There is a good reason for children wanting to go to college. Education has always meant status or social mobility to Americans--it does mean status and it does mean social mobility. The questionable assumption that college diplomas do mean success and all other paths imply failure has led us to rate our public schools good if most of the graduates go to college and bad if most do not. This situation has a carry-over effect. I think to the student body, it is very obvious we have come to attach status implications to their curriculum and vocational courses. This unfortunate practice has lead us to a track system. I had one in Bryan which locks students into an inflexible situation that has created what we call segregation by curriculum. At the eighth grade level, when they came to sign up for the ninth grade level, we put them on a vocational track or we put them on a college bound track. We talked liberally about changing tracks, but I do not think many ever did change tracks.

Now, what I am really saying is this--when we, in public education, give the same honor and the same recognition to the best bricklayer in the

class as we do the valedictorian of the class, we will have moved at least a step forward in reaching our goal of career education. We could go a step further, when society is ready, to invite the bricklayer who laid the brick on a beautiful home to a social that we are having, just as we would invite the architect. Then we will have moved society to a place where the stigma has been removed from career education. You know where all of our scholarships go even though we grant them from the State Department of Education--to college-bound students. How many scholarships do we find being given by the State, by individuals by philanthropic organizations to those students who want to further their career in some vocational area. So we must change this.

We Texans, of course, like nothing better than success and the bigger, the better. You know our national motto says we place our trust in God, but we are considerably more pragmatic than that. In our pursuit of success, we place an inordinate amount of trust in higher education as an article of faith in this country--the more education you have, the more money you can make. As a result, the institutions of higher learning in the United States are behaving like a run-away factory producing an ever increasing number of graduates. We are exposed to more education than any people in the history of any nation of our world and we are proud of it.

All this seems very American, very democratic. Anyone who wants a college education should be allowed to have it and as much as he wants. We believe that education means you can exchange the sheepskin for dollars in the marketplace. This "ain't necessarily so." If you want to see the reality of the situation, attend a gathering of recent college graduates. They are not there singing the old fight song or bragging on how well they are doing

in the real world. They are interested in where their next paycheck is coming from. Right now many of them do not know.

Let's look at some very simple figures to show what the problems really are. There were 6.8 million college graduates in the labor force in 1960. Today there are 9.2 million graduates in the labor force which means that those are the people who either have jobs or are looking for jobs. In other words, 1 out of 12 workers in 1960 was a college graduate. Today, it is one out of nine and in 1980 it will be one out of five or six with a college degree. I heard a professor from Denton the other day, and I have not checked his figures, say that we are training 80% of our children for professional careers when by 1980 only 20% will be needed.

I think that we should be concerned about what is happening to young women in our society and I am not a women's liberator. By the end of this decade there is going to be a real crisis in respect to jobs for women. As you see right now, most women go into female-dominated professions. One out of two is either a teacher or a nurse. By 1980 one out of three is going to be a teacher or a nurse and they, too, will start competing for the professional jobs that will just not be there.

The logical question at this point is, won't jobs keep pace with the increase of our graduates. Economists have grave doubts that our technology is developing that fast and that the skill mix of the labor force by 1980 will justify the employment of one college graduate for every five workers.

I guess at this point you are asking yourself if I am advocating that the whole college experience is a waste of time. I do not think it is a waste

of time; however, I feel that we in public schools, institutions of higher learning and the community have a responsibility to young people to be more efficient and more realistic in preparing them for the outside world. I think that the academic world and the business world as mentioned this morning operate totally in isolation from each other.

To begin with, I do not think you can deny young people the opportunity to go to college if they want it. There may be a lot of people that do not get jobs they want to get but still there are other things that come out of college aside from getting and holding a good job. As you see, we have some problems in education. Some blame the economy; others blame the education system for not warning the children that it is tough out there in the real world.

School men argue with tradition on their side that their function is to educate, not to run employment agencies. Also, my first point to redirect the curricula calls for revolutionary changes in public education, which means a complete rethinking of what the needs of children actually are. This poses a threat to some educators. I guess we could blame the parents, and some of us do who simply want their children to go to college to find themselves and prepare for a career. Ken Hoyt says, "It is the worst place in the world to find yourself and absolutely impossible in training for a career."

But blame implies guilt and guilt implies something wrong has been done and wrong doing implies that something right could have been done. Well, we thought, of course, that we were doing the right thing, but as we are

learning more and more these days, we know that the road to hell is paved with good intentions and with the best intentions in the world we have directed some of our young people into a heck of a fix as far as employment is concerned.

I believe that career education is one way of getting our children out of this fix. We have only ourselves to blame if we do not get started on this concept. We must try to find out what it is and what we must do in order to implement it.

A job is a central focus of one's life, so we train for a job whether that is a Ph.D. physicist or a plumber. Therefore, the exploration of what the job world offers must be integrated into the total educational program of our children, but we want to keep in mind that this instruction must be relevant to the real world and a job is a central goal. Until career education becomes an integral part of our educational system, we will continue to short change both our students and our society.

"A Plan for Educational Change"

John R. Guemple Associate Commissioner for Occupational Education and Technology

I came with miscellaneous notes on little slips of paper and so on to talk with you a few minutes about some very important things that are going on in education. This may seem a little disjointed, but I want to introduce two or three words that are going around in education. I think that most of us are or have been aware of evaluation; that is a good word. What's it mean? Student assessment are other good words. What do they mean? One of the newer terms you find now is trend determination; and here again, what does that mean? So let me give you a short Guemple definition of each that is easy to understand. Evaluation to me means what has been done--a historical kind of look at what's already happened. Pupil assessment, on the other hand, is what we should be doing. That is to say, what is this individual student achieving. By this process, a means may be found to change a system while the student is still there to cause him to learn more effectively. Trend determination then becomes what we will need to do in the future. So we have history, present, future, and these three types of terminology.

Now some of these we have been doing for a while. School accreditation is one kind of process evaluation where you evaluate a school to find out what kind of faculty they have, what kind of facilities they have, what kind of programs they are offering. Follow-up study that vocational educators have been doing for years is another form of "product evaluation." In other words, you find out if the market has taken advantage of the product and whether or not it matches market requirements. Many students who were in a vocational program got a job in something that they were trained to do while they were in that educational program. How many of them are working with

something that is very closely related to it, and how many have jobs that have no relationship whatsoever with what they were trained to do, and how many were just not able to find jobs? These are some of the questions that we ask in that kind of evaluative process.

Pupil assessment is a relatively new attempt to assess what's going on in education from the standpoint of the pupil. Last year we did a statewide sample structured statistically with some sets of materials to assess mathematical skills, and these went out to a number of school districts in October of the sixth grade. There were typical things that the sixth graders should have achieved, but the tests were given too early to measure the achievement. At the end of the sixth grade when that report comes out, you are going to have to have a pretty in-depth look at it. But we have some early returns, and a couple of these I found in our statistics are kind of interesting. Some of those questions I really didn't care about, and I didn't have any strong feeling one way or another. But some of them were practical. I am always glad practical questions are asked. One had given a picture of a clock with hands on it. How many of the students could tell the time indicated? Anyone venture to take a guess on the percentage of sixth graders who could tell time? 53% Given an illustration of a thermometer, how many could tell what temperature it was? Anybody hazard a guess? 90%

That does not mean that present mathematics instruction is not appropriate or that teaching is measured accurately by the number of questions for which you ask the variation. All the way from adding of central whole numbers to two number, multiplying, subtracting, dividing, adding fractions, whole

fractions, like fractions. All of these questions were supposed to give us some kind of measuring stick, and it was done early in the year so that the teacher would have the results within a month or so and could do some changing during the rest of that sixth grade year. The way the assessment instrument was applied wasn't exactly the way an assessment instrument should be applied. The important thing was there was still time in the school year for the teacher to address to that pupil population in that school classroom a corrected learning. In other words, if the student was learning well in one area and not well in another, that allowed that teacher to zero in on those areas where the students were weak. This was done by grouping the students in the classroom so that the teacher could then break them down in five or six component groups and work with one of them on fractions and another one on, we will say, multiplication and another one on something else. This is the kind of evaluation assessment tool that we have needed in education for a long time, and no one has ever put it together. We are now looking at one in reading.

We have called "evaluation" by different names such as school accreditation, teacher certification, and all kinds of things. What can we do that will be valuable to the teacher? If we are talking about assessment, we have left that pretty much up to the individual teacher; and we never helped that teacher by trying to pull together statewide statistics so that she could measure the achievement of her learners against the national, regional, or statewide achievement of other learners. And here again there are regional differences and state differences. Scholastic populations are noticeably different in various areas within a state. Some of these things you cannot average. Can we show that students in high density population centers (large urban metropolitan) lack to a greater extent than in non urban centers

in the cultural characteristics of what is going on in the home or in our society? There are learner patterns, and the teacher really needs some assessment tools to find out how to vary the instructional strategy. Now how do you get a handle on trend determination? Here again that is a difficult thing that we are doing one way or another. You have heard about manpower studies. Let me give you another set of methods.

Now with a fiery passion, I hate statistics; but as a tool for trend determination, they are sometimes the only thing you can depend on. Let me give you some statistics to show what trends are developing. These are national statistics you start with. In 1960 public school enrollments in the United States were 42 million. In 1970 there were close to 51 1/2 million. That is a 22% increase in ten years. What happened in the same period of time in the high school graduates? You know, we have been saying that the high school dropout problem is really dramatic. Between 1960 and 1970, what's been the change? In 1960 we graduated from all the high schools in the United States (this includes all the private schools) 1,971,000 youngsters. In 1970 we graduated 3,360,000. That is an increase of 54%. Notice that while scholastic population is up only 22%, graduations from high school are up 54%.

Within that statistic, there are a couple of interesting things. There has been a dramatic change in the percentages of men and women who graduate. The projection based on these statistics is that by 1980 more men than women will graduate from high school for the first time since the start of World War II. There are more women graduating from high school than men right now. I think the figures currently are approximately 49% men and 51% women. Between 1960 and 1970 the number of 18 year olds graduating

from high school increased nearly 8%. That does not sound right, does it? You know what that says? The graduates are getting older in many of the states. They are not graduating at 18--they are graduating at 19, sometimes even 20. The buildup in adult education slows the statistics up a little because now people can become high school graduates at the age of 50 or 60 or, in one case in our state, 87. The total expenditure of public dollars per students in average daily attendance nationally has changed. Here's another very interesting historical trend. In 1960 the average expenditure per student was $376. That is local, State, and national dollars--all publicly administered funds. In 1970 it was $858--an increase of nearly $500--over twice as much money per child.

These interesting statistics raise some very serious questions. How much growth is possible within the available funds? The population is already screaming about heavy taxation. Here is a fact about Texas. It came to light when we were doing some studies with the Advisory Council. We have been experiencing an 8 to 10% growth for the last five years in vocational education enrollments in the public school. If we continue to grow at that rate, in two years we will have the same percentage of our youth enrolled in our vocational education as we had in 1954. That is an interesting statistic, and that is one of the reasons for the increase, I guess, in the investment of dollars. With the impact of technology and technical change, many of the programs we have installed in the public schools in the last five years have been expensive programs requiring a major investment of capital in educational hardware.

I don't believe in telling jokes, but I have one that will lead me to some kind of point about the labor force by comparing what we need and what we have. I am sure most of you have heard the story about the Aggie that

was traveling through West Texas, and he stopped at a restaurant along the way, and he was in a hurry to get to where he was going. When you are in a hurry, you try to get something to go. So this restaurant did not sell anything to go. You had to eat it on the premises. So he asked the waitress if he could buy a pie to take with him. She said, "Yes, we have them. Can I just slip it in a sack?" "Fine, that looks like a good pie," he said. "What kind is it?" She said, "Apple." He said, "I like apple pie. Sack that up then." She said, "Could I cut it for you? Would it make it easier for you?" He said, "Yes, that would be fine." Then she said, "Should I cut it in six pieces or eight pieces?" So he thought for a minute, and he said, "I think you better cut it in six pieces because I don't think I could eat eight pieces of pie."

Now this story was easier to get away with in Houston because we were all sitting at the luncheon at round tables, but I want you to visualize a round table or anything round. Stare fixedly at the top of your coffee cup or something. Picture a pie and cut it carefully into eight pieces because this is a generalized kind of thing. I want to draw on a couple of models indicating what we need and what we have based on Labor Department information. Now if you have the labor force cut up into eight pieces of pie, the Labor Department says that we need a slice of that pie for professional kinds of occupations. All right, one slice is 12 1/2%. We need two slices for technical and paraprofessional occupations. What is a paraprofessional anyway? It is someone who assists by doing part of the professional job--a medical assistant or a laboratory technician. Two slices of that pie would be needed for people who have a high degree of technical competence and some skills in human relations. An additional two slices of that pie will be people with a high degree of human skills

and some technical competence. That is sales people, real estate, credit management, etc. Only one slice of that pie will be needed for non-skilled kinds of occupations. That is what we need.

What do we have? We have five slices of high school graduates. One of those slices of the five is needed for the professions. You have four slices left out of that five to do the work of six on the model that I earlier explained, and we have three slices of non high school graduates left to do the job of one slice indicated in the earlier model. So we do need some changes and developments in education that will help us create a better model of the school system's production.

What is vocational education? We have talked about vocational education for a long time. Now we have occupational education as a descriptor and we have career education as another kind of term to describe what we ought to have. But what we ought to have in vocational education is not a specific discipline such as English or a discipline like mathematics. Vocational education is not a discipline. It is a process. We had an economist that came to this State a year or so ago. He quoted a Chinese proverb. I don't remember the name of the economist, but I remember the Chinese proverb because it was a very appropriate one. He said that the Chinese had a saying, and it goes something like this in translation: I hear and I forget, I see and I remember, I do and I understand. Vocational education really is an education process of learning by doing. I don't mean that nobody else does that. In mathematics, art, music, and a whole assortment of subjects, we do that to some extent. Vocational education is not a discipline--it is a learning by doing process.

The other thing that I need to talk about is a fellow in my Sunday School class in the First Baptist Church in Austin. We have a fellow that is about 33 or 34

years of age. That is young, isn't it? We were kind of rapping a little bit one day in a Sunday School meeting about career education and some of these new things. They seemed to be more interested in that than what I had prepared for the Sunday School lesson, so I went ahead and let that float a little bit. This fellow described his education for the class. Let me describe it for you. Public school with kindergarten, 13 years; bachelor's degree, 4 years; medical doctor's degree, 3 years; internship, 1 year; residency, 3 years; total, 23 years. Now if he started school when he was six, he was 29 when he got out of school. Actually he was 30. After his military service of 3 years, he was ready to begin his professional career. He was 34 when he got ready to practice this profession for which he had been trained. How long can he practice it? He has to study at least 16 hours a week to stay on top of changes that occur in his specialized field. He is a husband. So far he is a father of three small children. As they grow, they consume more of his time. How long can he stay current? How long can he do all of the things he feels professionally necessary to keep up and still put in a 40 hour week or more? Something has to give eventually--either the work hours, or the number of patients he can take care of, or the leisure time, or part of the responsibility as a husband and father. And he is under constant pressure to take care of all of these responsibilities. There are not enough doctors to see all of the patients that need to be seen, and he is the only father that those three children have. He is the only husband his wife has.

What is career education anyway? Career education should be designed, I think, to eliminate the necessity for 23 years of education. What if he didn't have his mind made up and he would have to go back and repeat something. Added years (or courses) waste money and time but, more important, shorten

productive life in a profession or career! I happened to know another fellow who started out in one direction and came back at the age of 50 to get his medical doctor's degree. Waste by indecision or doubt or misdirection could "blow the whole thing," and instead of having 30 or 35 years of productive life doing the thing he chose to do, the first doctor I referred to might have only the 15 years in his professional career like the other doctor with whom I am acquainted. The doctor with 30 years to work makes a much greater impact on a critical need for health care services than does a doctor who has only 15 years to devote to the profession. What was it that they said in Houston? Will you say it again here, Dr. Abernathy. If you miss one day of work, it can never be regained. If it is missed, it is missed forever. There are a lot of other things we can go back and do but not productivity on the part of an individual. Not even one hour can ever be regained. It is lost forever.

Career education as a term does not mean a program. Here again we are talking about a process. We're speaking of reevaluating everything we teach in public schools that has an impact on life. My wife for 20 years happens to be a public school music teacher. She is the first one to admit that there are jobs you can get where music is important. There are a lot of other kinds of activities that have music for relaxation. You get all these tensions built up in the daytime, and you go home and listen to the music. You go somewhere and participate in music, and it releases some of that tension like golf does for some people. She is not the only one to admit that there are jobs in music. You know, the public school program is not necessarily designed to inform any student about the number, variety, and requirements of jobs in music such as selling of music instruments and sheet music, writing and

publishing music, and performing. She is also one who would point out that some of the children in a music class can learn some things that they can't learn in a self-contained classroom environment. They can't visualize dividing something that to them can't be felt or seen or experienced directly. How do you take half of a whole? It is not something that some children can get a handle on. When you get past, "Here's an apple. You cut it in half and you have two halves," her students can also understand, "Here's a measure of music. You can divide that into halves, quarters, eighths, and thirty-seconds." Music is experienced and they can understand.

So there are many areas in career education that have a direct impact. How do you teach art so that the young people who take it can understand what kinds of jobs will be available, what kind of work environment, what kind of attitude? How can you harness creativity and make it a productive something that you can do for life, earn a living at, and enjoy while you are in school?

I remember when I was a kid, we had windows in the school room. You could look out the window and get an idea, a very limited idea, of what the world was like. Unless the world is brought into the classroom, or the classroom is taken out into the world, you can't broaden that concept because a child has a tendency to departmentalize what goes on in the classroom and not treat it as part of a larger whole. We have learned a lot in Vocational Education--no way of getting around that. Everyone ought to know that all the vocational programs that have a cooperative work station used in that real world are a way of reaching out and including a large piece of the world into the classroom. The students that are enrolled in these programs mature

faster than other students because they are out there where the action is. They have a boss, they deal with customers, they deal with other employees; and their experiences cause them to mature faster. I heard somebody say not too long ago that a youngster just getting out of school at 16, 17, 18 cannot get a job--the employers won't hire him because of the high insurance rates. They like the more mature students, and they would rather have a graduate of a post-secondary institution. I think that is true in many cases, but the co-op students are not turned down because they <u>are</u> more mature at an earlier age.

Now visualize for a minute a Career Education school system oriented around this idea of getting the kids out of the classroom into that world. A civics student works for a judge in a court, and he is interested in political science thinking in the back of his head that he would like to be a lawyer. How else does he learn what the work environment would be like for him, that he would enjoy it, that he would realize real benefits? A kid is enrolled in art working in a commercial establishment where tney do such things as silk screen processing and the whole business that had tc do with display advertising and so on. How better to get a feel for whether or not he would like this as a full time developmental career field? All we need are some creative teachers to look out into that real world and to find relationships to everything that we teach in public schools.

I have another pet peeve. I was in a meeting not too long ago for a school district. You know they have inservice days before school starts, and I was out there kind of saying we are glad you are back to work this year. It is a relatively small school district in northern Texas. After the presentation, a teacher came up to me saying, "I teach fifth grade and I got a whole new

series of State adopted textbooks this year. Some of the children in my class can't read well enough to deal with that text material, but I feel obligated because the State invested in that material and I use it. They spent a lot of money for those textbooks, you know." I said, "Your first responsibility is to that child to help him get his reading skill and his computation skills in hand; and if he does not do anything else but raise his level of achievement in reading and computation, you would have done marvelously with that child." Now she is frustrated because she feels that she has to teach social sciences to that elementary child. Isn't that really a question of technique? Can't we really teach a child the science of getting along with others and how to read out of a social science textbook if it is designed to improve his reading skills as well as his intellectual grasp of the social sciences? Can't we teach kids how to get along with each other while we are teaching them to read and solve mathematical problems? Can't we teach them to solve some larger problems that they may have at home or with other children at school?

I guess that whole story on Career Education, as I conceive it, can be stated pretty biblically, "Come now let us reason together." It is not what we are teaching that is wrong but how it is being taught that needs to be reevaluated. All of the teachers in the public school systems of the United States and of the world grew up in an era before mass visual communication like TV. All of the children who are in that school system grow up with TV now. Doesn't that have implications for a change in techniques of teaching? It seems to me that that is a reasonable assumption. Why don't we have textbooks on video tape such as material for cognative learning and for learning communication skills that are not only reading but listening and speaking? Oral language is one of the most under treated areas of

learning in our whole school system. I am not putting down anything in public education. What I am saying is that now is the time for us to look at ourselves very carefully.

Let me go back to some of my notes and refresh your memory. We have gone from $376 per child per year as a national average in 1960 to $858 per child per year as a national average in 1970. The prediction is that there will be only about 10 or 12% growth between 1970 and 1980. Why? Because the dollars invested in the future of your young people is limited to the growth factor in the economy. The percentage of the tax dollars being delegated to public education is not going to be substantially increased unless the taxes are substantially increased. We have gotten to a cross over point where the tax revenue potential is limited to the current taxing authority of the State, nation or local district and growth of the GNP, or it is directly related to the growth of additional tax authority that is not now on the books. You can't have your cake and eat it too.

I think personally, having talked to a great number of superintendents, teachers, and teacher educators, that we could use the dollars that we already have a good deal more wisely. It might take some changes in statute to free the local board and the local administrator on how he decides to use those dollars. That may be one of the changes that the Legislature may see fit to make, but we have to put more resources into counseling of youngsters. Maybe instead of investing in counselors for students, if we invested in counselors for their teachers, we might effect more change in the classroom and learning patterns. I don't know. It needs to be in the hands of the local administrator because student needs might change from one area of the State to another or from one pupil population or faculty to another.

"A Workable Model for School-Community Relations"

Dr. Walter Kerr, President
Texas Industry Council for Career Education, Incorporated

I appreciate that. That is the reason I come to these conferences because there will be fine people. You can't get somebody like Vernon McGee around all the time and I do appreciate him. I will certainly remember those fine things you said, Vernon, they will keep us going. The first thing I want to say is thank you for having the privilege of being in the room with a group of people who have the greatest opportunity, responsibility, and actual success in changing the whole picture of the Texas area. There is no question in my mind that the thing we have been talking about is tremendously important. And as Ray Barber says, it's getting about time to lay it on the line. Just what do we mean by this term assessment and evaluation and even career education, even career oriented education? And what is a community? All of these things are tremendously important. Let me tell you about something that does deal with terms. As Vernon has told you, one of the things that I have tried to do is to do a little preaching. I have a good friend of mine who does the same thing. You may know of him, Mr. Bob Richards. We just watched the Olympics. He held the pole-vault championship for years in the Olympics and also held the decathlon championship, which is about the best an athlete can do. He made a very interesting remark. He said, "I don't know how far they are going to go with the poles. When I use to pole-vault, the pole wouldn't bend. We had to actually get up there. Now the pole bends and it throws you up there. How high they are going to go I don't know, but I think it just depends on two things: how far they are going to make that pole bend, and how far that guy is willing to ride it up." A conversation between John Guemple and Dr. Abernathy fits in with that. They were talking about preparing students to work for the telephone company. Dr. Abernathy said, "We can't, in school, train people to climb poles." John Guemple said, "Why not, we are teaching kids in school to pole-vault." I don't

know to what degree we can really go to train people. Well, I was up in South Dakota, and at the same Holiday Inn where we were staying, Bob Richards was there. So they had out on the marquee, "Welcome both of you." That kind of makes you feel pretty good. I got to talking with Bob and he said, "Let me tell you a true story." I said, "That's fine, I would love to hear it." He said, "Well, you know I belong to a faith called Dunkards and so does my father. My father has been a minister in that church for years. My father told me the other day that he was sitting on the bus with all his clerical regalia, the big black hat and all the trimmings that they wear. All of a sudden this bus stopped. When it stopped my father said it was for the drunkest man I have ever saw in my life. He couldn't even hit the ground with his hat. They opened the door and he tried to get up the steps. He said he stepped back down again and started again and finally slid up half way and finally got inside. He tried to get his money and spilt it all over the floor and when he leaned over to pick it up, he fell over in the bus driver's lap. The bus driver was getting very disgusted with the whole thing. He finally straightened up and sent him on back to his seat. The only vacant seat was right there by my father. This fellow got down there and got situated in his seat and kind of looked around and looked over at my father and looked back over at him again. He said, "Hey mister, what are you?" My father said, "I am a Dunkard pastor." He said, "That's funny, that's what that bus driver just called me."

So I don't know, you've got a lot of terms going on and I am afraid that it is possible to have a little bit different understanding of what we are talking about. There is one thing that I do want to say since we are talking about exact terms, primarily revolving around the idea of career education. Even with the middle term in it, I think it is very helpful--career oriented education. We ought to point out very quickly two things for the sake of time. You ladies and gentlemen must be mature people because the more mature you get, the longer your endurance span is. Well you must have some pretty good maturity because you have been here a good

while. So for the sake of that, I want to say in listening to these groups and reports of these meetings and in talking to gentlemen over the State about this, I want to lift up two very important things that we are talking about now; that we are facing. What kind of education will be the most helpful to our youngsters and the best type of education that will help to build this country into what it needs to be? I would like to point out the first. I believe the very first thing is the most important thing in the world--attitude. Attitude will get you in more places or get you out of more places than anything else I know. The attitude of it, now that's the thing I am saying first and foremost. Each of us here in this room has a different attitude concerning what we are talking about as career education. Now you know that there is a certain amount of privacy. Regardless of how much is gone, there is still alot that remains and that's the privacy of your own attitude toward the type of thing we are talking about. I don't know what it is. I hope the attitude of every person is a little more open to recognizing that there is something down this line of which we are all talking about. I hope so. Now there may be some other attitudes such as: Somebody else can go about it. It is too complicated. I don't understand it. It isn't what is needed, it isn't for my school and so forth.

But let me say to you ladies and gentlemen from this standpoint that I hope the important thing that we have here is an attitude that at least remains open and growing that we might receive various types of understanding. There are various places where you can receive. A person that is able to do that somehow is able to speed up the intensity of his concentration, the intensity of his mind in which he is able to communicate freely with other sources of information that the person at the average level of stimulation cannot contact. I am speaking of the area of creative imagination. You hear of the great revolutions that have come religiously. It is the person that has somehow brought himself up to the point to where he is much more aware and he is able to freely communicate with creative imagination with

certain information that is around. Let's say a supreme intelligence that the ordinary person is not able to tune in. This has happened again and again and it has helped shape history. Somebody says where does the hunch come from? Where does the real insight come from? Where does the real creative part that is one's plan come from? There is a supreme intelligence, gentlemen, from which it can come and it constantly filters in, more than we know. I think most of us believe that and I think it is not to be closed here. Because I say if we are talking about how the lives and the destinies of millions of youngsters can be changed; if we are talking about the improvement of their social and economic life; if we are talking about the great concept of America with all that it is meant; if this is not enough to get the attention of the supreme intelligence, what is? So I think in this important planning, God is a great source on which we can rely.

You can get a very good source of information really from the minds of other people in this room. There have been turned loose certain reflections of thought that make it possible for us to come to a degree of thinking that we would have never thought about if we had not been here. You could have been out all by yourself and it wouldn't have happened because here two or three are gathered together. There are more than two or three. Now I'm not talking about religious concept, although it applies. There too I have dealt with it. But I am talking about when this happens there is another intelligence that takes place that is more than the one or two that is there. It is greater than the sum of its parts. Definitely so. So I add that source. Let's continue the opportunity of communicating one to another. The other type of meeting that you need to have with your own teachers, with your parents, with your students on down the line here is a great opportunity to let this concept sink into your subconscious mind and theirs. Gentlemen, if you want it, it will feed something back to you that is better than you ever had before. You will provide superb leadership!

Then there is our own attitude and that attitude is tremendously important because you are the ladies and gentlemen that find it and determine it. You determine it in this area, then your thinking becomes what your counterparts are thinking. Across this whole great state and this whole great nation everything of real importance is riding on how we are going to train the new generation. Believe me, that is what we are talking about now.

Now the other thing that I want to say about attitude becomes tremendously important. It is the attitude of some of our own teachers concerning vocational-technical education. I mean it is supposed to be in the minds of many people and it might still be in the minds of some of us that career education may be a second rate type of education. Some still think it is not the very erudite type of thing. We need to counter that concept strongly. An institution does not move down in its status. With career education it moves up, and soon that fact will become clear.

There is another attitude and that is the one on the standpoint of your student and the student's parents because often times it has been said very clearly that vocational education is an excellent education for somebody else's kid but not mine. Oddly we will find that people who have done excellent work in certain careers will tell with pride of the more, shall we say exalted professional status, which their children have achieved. So attitude becomes very important for the mind of the student and for the mind of the parent as we are engaged in this.

Now that was the first thing I wanted to say. The second thing that I think is of importance in this endeavor of education is that our finest minds are enduring it. Our finest minds in education are talking about it. Now we are talking in terms of career oriented education. We have heard Vernon McGee one of the finest educators and thinkers. We have men like Alton Ice talking in these terms. We have had John Guemple and Ray Barber expressing their enthusiasm for career

education. Dr. Edgar was speaking in terms of doing this type of thing long ago. I know because I spoke to him in regard to a program that I will describe that has been in effect over five years. Before these terms ever came about he was thinking about it. All we have to do is think for a few minutes. Certainly we have to recognize the leadership Dr. Sidney P. Marland is giving career education. As you well know, he said often we are asked, "What are you educating a youngster for?" All too often the answer has to be he said, "We are not real sure." He also said, "It's got to go, we have got to have career education now." So you see we are in good company.

So what have we got to think about in education especially you administrators? I say to you, ladies and gentlemen, you really hold the key to a very great degree. I mean as to whether it really gets off of the ground at all. Whether it becomes a mediocre problem or whether it becomes a history changing movement. I think you hold the key to that and we want you to hold the key to it because we want that type of local understanding and responsibility that is indigenous in that way of life we are trying to preserve. Now what are you going to think about? The very first thing you are going to think about is the second term. The first is attitude, the second is money, plain old simple money. I mean there is no way to get around it. It is going to be highly important. May I say to you ladies and gentlemen at this time that the financing of the education system is in more of a crucial position at this point than it has ever been in the history of the United States. Right now it is far reaching. I think it is far more reaching than most of us realize. We never really had that problem for a number of years, but it is here now. It is not here simply because we are talking about how we will get money for career education. We are talking about education per se, all education. As you well know, we are operating at the present time under an unconstitutional means of getting money. Now that is very frightening to a person

to know he is operating with an unconstitutional means. You have got to come up with something quite different and there are many people thinking very desperately along these particular lines. I hear people say I could put career education in my school but it is going to take more money. The thing that I want to say to you ladies and gentlemen and I really hate to say it, is that there is a very great likelihood that even the education you are doing now will be done with less money. It is not an impossibility. Now as we know the case in Texas, the Rodriguez case, which pointed out the unconstitutionality in which we got our money was not the first case. The first case was the California case. I was speaking to the education committee of the U. S. Chamber at the time when the California decision was made. At that time, President Nixon sent word to the Chamber of Commerce that he wanted to talk to them. So a group went to the President's office and President Nixon said, "Ladies and Gentlemen, do you realize that the decision of the State of California that gives the unconstitutionality to the way in which we are supporting our school systems across this country is a decision that well could have a far more reaching effect upon the life of this country than any other decision we have had." Now that is of significance. I mean he is at a point, it wasn't just his opinion though his opinion is of importance because he is at a place where information feeds to him. But he had counseled with a lot of other people. He said, "This is how important it is." So immediately the answer was, "Well President Nixon, do you think that if it appealed to the Supreme Court that the Supreme Court will uphold it?" Well I wasn't there but they told me what happened. He unbuttoned his coat and he patted his pocket and looked up and smiled. Then he said, "I will tell you folks something. If I were a betting man, which I am not; but if I were a betting man I would bet all of the money I have that they would uphold it because it is completely in line. In the philosophy of the decisions that they come forward with so the hope is not in that direction." He said, "You are the people now representing the leadership across

the country in the area of education. Where do we go and what is the answer?" Now you see I mentioned this from the standpoint that this could become important. Why do I say that for a long time that the rank and file of the citizens of this great state, of this great nation really hasn't had any direct voice in how much money goes into education. He really hasn't. I mean he is part of the system. I mean he is already there, he is already set up. It is too big for one individual or a group of individuals to do anything about it. It happens and he just becomes a part of it and goes along with it. You see now he has never known before that nearly half of his tax dollars go into education. That is an awful lot of money going into education, ladies and gentlemen. Nearly half of my tax dollar is going to education. Somewhere between 40 and 45 percent is going to education. Suddenly he is going to say, "Now all right, we got to come up with another constitutional way." So what is he going to do? Now he doesn't have to go along with the system. He has got a voice that he didn't have before. Now facts come to him that have never come to him before. A hand and a determination have come to him before. Before the public could more or less sit there and education went on. With that, whether they liked that or whether they didn't, the money was about the same. As far as some of the money that came, the major portion of it. Now he has to listen, now he will have representatives and senators, now he will have everybody talking about what their ideas are, what ought to be done. He is going to listen. The man on the street, the man or woman that is out there will have an opportunity to talk about what happens to the education system and how much of our tax dollar we want to give to it. Either by direct vote or by representation in the manner that he has never had before. What is going to be his answer? Is he going to say it deserves half of our tax dollar? Is that what he is going to say? I don't know. Maybe, let's hope so. Let's hope he says our return is greater than that. Let's hope he says that from all that we get from our tax dollar, whether it is defense or whether it is protection, whether it is roads or whether it is welfare, or

everything else, education is worth as much as everything else put together. That's what he has got to say, to come to that conclusion. Now you see the point is he will take a look for the first time. This is the thing that worries me, wherever he has had an opportunity to vote "yes" or "no" on the increase of tax dollars on education in special bond elections throughout the State of Texas and throughout the United States, the situation has been in 65 percent of the instances where he gets a voice, he votes "No." No more money in the bond issue for education.

We are not just talking about career education. We are talking about education per se, that is what we are talking about. Now then, Mr. Guemple comes with a very interesting point that has to do with financing $396 that was coming from all sources per capita attendance in the school. Now over a period of time from 1960 or 1970, it gained a 110 percent. It came up to $800 and gained 110 percent within a ten year period of time. Now this is before the Rodriguez case, the California case, and other cases that are now before the Supreme Court. Even before the clear analysis came out with the idea that the economic structure had just about provided all that it was going to be able to provide for education. There will not be an increase of 110 percent probably there will be only 25 percent, even if we were constitutional. So it meant that we have to make a 25 percent increase do what a 110 percent increase did before. Now we have got to do the very same thing and do it now with a 25 percent increase. Mr. Guemple asked the question, "Can we do it, I don't know whether we can or not." I want to answer it for you gentlemen. The answer in my mind is a categorical "No." You can't because expenses are moving up. Nobody is really going to be cut down on things. Inflation is already underway now especially if we are talking about career education because career education costs more than any other education. Now let's face it, you can hang a map up here and pass out some history books and you get a credit in the course of history. I am not trying to undersell, I am talking about expense. Folks, if you get to

where we are going, to supply people who really actually move into all areas of the automotive industry, you are talking about motors that cost thousands and thousands of dollars. Now do we do this type of thing with less money? You don't but let me tell you how to get more money than you ever had for all types of education. It is my humble opinion that what we are really going to begin to talk about is career education within career education. Now the career education that is going to be talked about is the broad general category that we are talking about. It is really a skilled stepped up increased version of your vocational-technical school. It's going to be better training, better teaching, upgrading in its importance, better advisory committees, better counseling for youngsters to go into it, more awareness of the community that people will trade. This is what will happen, this will be the general thing of career education within the school. This is vastly important. This is the way it will function. Now within it there will be what I speak of as more a truly career oriented education inside of education. You see, the U. S. Office of Education and our own Texas Education Agency have defined 15 major clusters which they say the average person makes his living; transportation, construction, health, manufacturing, etc. Now they set these up. These are good enough things to work by. Now what I really visualize growing in our school system will be the career center education inside of the even more general career education program. Now when you get into this you will begin to deal with more specific careers. While I was talking to high school assemblies a building contractor said to me, "Look, if you know any of these youngsters that want a job, you tell them to come see me." Well that got my attention because I knew thousands of youngsters that needed a job or needed a better one. So finally I said to him, "Wait a minute, you said this to me too many times. I want to ask you something. If I sent these youngsters over to you, would you hire them?" He said, "Sure I would hire them if they can do what I want them to do." I said, "Oh well, now we've gotten to it, if they can do what you want them to do." He said,

"They can learn it, can't they?" I said, "Can they learn it in high school?" He said, "I am of the opinion a person that can learn anything in high school, they can learn anywhere else." I said, "I am inclined to agree with you. I want to ask you this, would you hire him because you are a good citizen or would you hire him because you need him?" He said, "I need him, I need him very badly." And I finally talked to one that knew the statistics. He said, "The construction industry is the biggest industry in the United States. It is a 100 billion dollar industry a year. It is larger than automotive and steel combined. But in the last normal year of building we did not do 30 billion dollars worth of work of construction for one simple reason, the lack of qualified people to undertake it." I said, "For goodness sakes." He said, "And when it gets back to normal, which we are about getting into now, they are projecting now on a 125 billion dollars of construction for the coming year. We will find that we won't do a third of that either for the very same reason." I said, "Wait a minute, run that by again. You mean there is one industry that could turn loose 30 billion dollars if he had people that were properly trained? And yet I know thousands of youngsters who could be trained." He said, "That's right." I said, "You know what you say is frightening, but at the same time it is the most exciting thing I have ever heard. It gives us a possibility." So I tried to look into it, I went to the other associations. Most leaders are in some type of association. We are organizers, we join. Somebody said in America if three of us get together, we elect a president, a vice president, and a secretary. Well, that is pretty good and a committee is appointed. A committee of three. Well, the best committee of three in the world is a committee of three with one of them sick and the other one out of town. Nevertheless, we get organized. "I want to check into it." So you see they have all of these associations. Each one has association executives. They also have an association of association executives. So I said, "I want to talk to them." They said, "What do you want to talk about?" I said, "Manpower."

They said, "Man, we have been waiting for you." I said, "What do you want to talk about." They said, "We have got it written down. How do we solve the manpower shortage?" I said, "If I knew that one..." But I'll talk about it. You know what I found out, ladies and gentlemen, that there is not a major industry or business in the State of Texas that doesn't tell practically the same story. Would you believe that this is the story which everyone of them would say. If I could find the youngsters know just even the entry level and are really motivated enough to work. I wish I had time to deal with it because it was mentioned here that they had some of the character qualifications that you could depend on. I could extend my business by a third, everyone of them. Oil well supply said that; automotive industry said that; butane dealers said that; cleaning and pressing people said that; everybody said that. Now that's a very exciting thing. If the gross national product does point something we all get excited. We are talking about, my friend, that the inteiligent business people who are leaders in these industries are saying we will increase by a third if we have only one thing, trained people. Can you imagine what it would mean to find the economy of this great country expanding by a third? We realize what that means in every area to all of us what we are talking about, that's the thing I mean. Now then, when that happened I went to see Dr. Edgar very quickly. I had worked with him on some other matters and I knew his ability and insight. After discussing it, Dr. Edgar said, "Well, if we could get an authoritative group we could pilot with some and spread it to others. This would be justified. I feel this is what is going to have to be done." I said, "That's great, let me go to work." So we did. I spent over a year's time trying to get a group of people together. The construction industry finally got their associations together because they had to have employees. They set up the Construction Industry Council for Education, Manpower, and Research. They went into their own research with A&M University and the University of Texas. (I never mention one of these schools without mentioning the other.) So finally,

they had some facts. They realized that in 25 years we have got to build another United States. For every building, we have got to build another one and keep all the rest operating. There is something that is exciting, my friends. You talk about the future of this country because that means business and happening. That's the story, that's what has got to happen. All right, we will start. Then they begin to look where we are going to be with the rate of people that are getting old, that are retiring, that are dying, that are coming out of business in relationship to the youngsters that are learning the construction trade. Where are we going to be 5 years, 10 years, 25 years. Well the answer was we are in trouble. What about in 10 years? They said, "We can't continue like it is." When Mr. Ramnee had our Governor call the construction people together, you remember when he did that, he said, "This could very well be one of the most important meetings." Mr. Ramnee didn't come but he sent Dr. Finger who is a PHD, very intelligent PHD. There are some intelligent PHD's. He said we don't believe under the present means, you can keep up with the building that has to be done. Well boy, we sat very still because we already knew it. So we went to work. They called in Ray and Alton, all of them giving good guidance. They called in curriculum people who said, "Tell us what a fellow has got to know to get an employer. We don't want anybody else, we want the people who employ these people. Tell us what the student needs to know and do." There are very few people who will pay you anything for what you know. It is for what you do with it. What does he have to do? What does this one have to do? So he laid it out, a program Environmental Construction Technology. We started with just environmental technology but then environmental became so much of the ecology we had to put construction in. We are talking about environment inside the four walls, the plumbing, the heating, the cooling, air conditioning, all of that type of thing.

You see the mechanical phase of the building is 60% to 70%. Architects say soon

it will be a greater percentage. Labor costs are going up and these are the major skills in construction. You won't have to go anywhere else and set up that kind of advisory committee, not just from the top level advisory committee of council at the level of top construction people that appointed the people. Now let me show you how the prestige comes about. We don't say to the person, so you want to be a plumber? We have very well illustrated this morning that we don't have to cry our eyes out about the plumber. There is plenty of prestige. If you know a boy right now that's got a master license in plumbing you let me know. I can send him to five contractors where all he has to do is work 40 hours a week and make $19,500. In fact, I have applications right here if some of you folks are interested in them because many of us aren't going to do much better than that. You can buy alot of prestige with that.

We have another idea that is backed into the school again. First we did have an idea to try and install something of patriotism into our youngsters. The McGuffy Reader did talk about basic integrity. It did talk about what friendship means, what a commitment meant, and so forth. We had to kind of move away from that. I'll tell you something, you are being given a great privilege because you are being moved closer back into that. Career education also means a certain type of character that goes along with it. That's what any of these people would say to you. Even the employer that wants the least of career education in school will say please give us the person that has the dependable traits and some motivation . So what do you say to the youngster? You don't say to him, "Want to be a plumber?" I know it is late and just so we will keep everybody awake until we get to the end. You know about the fellow that got the bill from the plumber and called him up and siad, "There must be some mistake." The fellow checked it over. He said, "No sir, that's not a mistake. That's the correct bill." This fellow said, "My gosh man, I'm a lawyer. I don't make this kind of

money." And he said, "Yes sir, I know. When I was a lawyer I didn't either." Well I mean this is the type of career situation we are talking about.

Now we talk about the dignity of work. We talk about it as a team play. We have got to build into our kids that economics is a team play, it's a team. I know alot of you fellows started as coaches. I know you did. It's a fine way to start. But suppose you went to your coach and said, "Coach, are we going to have a pretty good football team this year?" And he said, "Yes sir, we are going to have the best ever." That's fine but what makes you think so? I'll tell you why. He would say, because we got 35 quarterbacks. Great! I mean then you got no team at all. This country is an economic team. Everybody can't be the president of the company. If everybody is the president of the company, who designs the product; who manufactures the product; who packages the product; who sells the product; who installs the product; who services the product; who turns off the light; who sweeps the floor? It's a team. So we talk about the dignity of work. Now the truth is there is no such thing as an inherited quality. There are people who are very dignified who do very menial jobs. There are some people that can be in very exalted jobs who lack a great deal of dignity. It's an individual factor and this is the thing that we speak of. The individual works. If he does a worthwhile job he stands up in his community with recognition and respect regardless. And this is the part of the career education idea but that's not enough.

Listen to what you can say, "Are you interested in the exciting field of construction?" Because we are talking about an architect. We are talking about a construction engineer. We are talking about a manufacturer. We are talking about a contractor. We are talking about all of these because the construction industry needs them all. The sky is the limit. The design of a building and what it is hasn't been touched. We need all of them. Career Education isn't talking about cutting down on somebody's amount of time in formalized education. Its real

meaning is to try to find some way to keep our youngsters in organized education longer because 50% of those that enter the first grade never get out of high school. This is not good enough to maintain a great nation. He moves up in skills and grades and every time he moves up he gets excited about it. This is the career orientation inside of the broad career education we are speaking of. Now we see it happen. We found some people in the San Antonio area that moved out of one district into another one because he said I want my son to be in construction. I want him to be a construction engineer. That's what I want his interest to be in and I want him to get this in the school right now. So he moved over there to get prestige. Now notice, suppose the youngster is in his second year of high school; his father has already disappeared; his mother gets sick; he has to go to work to keep his little sister eating. He has got a money-making skill. He knows pipe trades. He can fit pressure pipes, he can do basic plumbing and he knows the guy who will already employ him. He can put more on the table for his little sister and besides he has an idea. He has a career. The American dream remains. Never should we get to a place to where we decide to pick a system like the orientals or even Europe where we decide somewhere in junior high school that this person is college material, this person isn't. No one can say. The real difference, my friends, is whether the youngsters are turned on or whether they are not. Nobody can say about that until it happens. Career education tends to turn them on. The sky is the limit. The chairman of the education committee of the AFL CIO was asked in Washington (who taught English literature in the university), "What do you think about this program?" Some contractors asked him. He said, "I have seen education from both sides of the fence. I say this concept is an educator's dream. And the educator who provides it has the satisfaction of knowing he has made a real difference, as a teacher, in the life of the student." I agree with him, I do not think that it could be said better. Therefore, ladies and gentlemen, when you begin to find that the public begins to

say the education system makes it possible for me to increase my income by 30%, you are going to find bond issues far easier to bring about. You are going to find out that about 50% of the tax burden is not too high. The Texas Education Agency now has a career education model in water utility piloting in 15 cities. Now I close this with the automobile picture. We met in Austin. The representatives came down from Detroit for the major manufacturers. Also we had the major associations. They set up a council, the Automotive Career Education Council. The president of the council said to the educators there, "Gentlemen, if what you are talking about works, if you can actually bring a youngster along, motivate him to actually enter the field of automotive and give him any type of basic level entry skills, I can tell you right now financing is going to be no problem whatsoever." So I say to you gentlemen, this is a very great opportunity. The two things, lets lead for attitude and for finance with career oriented education. Because as I see it not only is it the hope for education but it is the hope for millions of youngsters across this land. It is the hope for the way of life that you and I want. Come ladies and gentlemen, you may have been in a business. You may have been in a trade. It may have gotten to be a profession. I said to you, it is calling. There is far more riding on you as to whether these youngsters can be brought to take their places economically and socially in this country than on anyone else.

Surely the significance of this challenge would make your life seem privileged. Surely the accomplishment of this task would make your life worthwhile. And it will be accomplished! I have confidence in you and your counterparts across the State.

The educator now in this decade is the most important person in our society.

I thank you.

"A Workable Model for School-Community Relations"

Mr. Callie Smith, Superintendent
Longview Independent School District

Thank you, Dean. I appreciate that introduction. I'm a little disappointed in Karl Vincent. He backed himself right into a corner, because he could have looked closely at the program and realized that I had the last word. My friend Karl is in a tight spot. W. C. Newberry tells a story that illustrates Karl's dilemma. Dr. Newberry says we are a society that says things we do not mean. For instance, we are always saying, "You all come to see us." W. C. points out the fact that after a New Year's party one evening quite late, as they left the home where the New Year's celebration had been carried on, a couple that was leaving at the same time said, "you all" come. And W. C. said, "Fine. What's your address, and we'll just come on over now. We don't have anything else to do." The look on this couple's face. But Karl's in that same predicament, because he asked me if I would have dinner with them this evening, and of course, didn't think that I would or could. I accepted the invitation and he's been telling me all during lunch, and the breaks, of all the duties that he has with the service center and how very busy he is.

Harlandale received a substantial grant for career education and several people have asked me through the months since that time how it came about. The word is grants manship, and I assure you that it was on the part of the staff. But let me tell you how that grant really came about. We first sent in our proposal that was written by the staff, and it was sent back. We got very little reaction. Then we rewrote it and sent in the proposal and in it we proposed a career center to be named the Guemple-Browning-Marland Career Educational Center. Very shortly, we were notified the grant had been approved!

Seriously, I do want to talk a minute about the Harlandale career education program and as I talk about career education, may I say we are talking about total programs. Kindergarten through 12, as far as the grant is concerned, but certainly adult education of all kinds as has been mentioned here today. The project there is divided into four components and I would like to name them for you and tell you at least one or two little items about each. The research and development component is the first one. Under research and development there are curriculum leaders who are charged with the responsibility of selecting teachers. Over 100 teachers are assisting in writing into the curriculum, career education experiences and training advice for teachers in the system Kindergarten through 12. The important point here is that regardless of how we may design a program, unless the teachers are involved and we take them with us, we might as well not start in the public schools. Secondly, there is a counseling program. The counseling program actually made it possible for the district to add eight counselors to its system beyond those already employed. Four of those were added in the elementary schools and four were added in the middle schools. These counselors were not primarily to counsel students. John Guemple stole my thunder at noon but they were added to counsel teachers, not in terms of the "couch type counseling psychotherapy" that we might think about, but in terms of counseling teachers about this matter of the world of work, the dignity of work , and how important it is that we let young people know about the experiences in which they may become involved when they get out of school. One of the things that was written into the

credentials for these counselors was work experience, and to show you that it was carried out, the total counseling positions were not filled, because the criteria that we were looking for could not be met in the short time that we had to do it. I think they have been filled now. But one of the criteria was that the counselor was to have had work world experience. You know, as much as I believe in our educational systems, I think one of the really serious problems that we have is the lack of experience in the work world, both at the public school level and I might add, I don't believe our colleges and universities are exempt from this category. The third component is a community liaison person who is working full time with the industrial and business community. By the way, they started that with a Dutch treat luncheon in which they had over 50 participants. These business people and companies have joined together to say, "We will support the program," and have named individuals within their organization. The person that is heading the community liaison position in the career education program is in the process of compiling and has already in the hands of the teachers a sketch of individuals and concerned companies that are willing to either come into the world of the classroom or let the classroom come into their world. If you will pardon this, Mr. Businessman, if you are here, a teacher can requisition a businessman almost as she requisitions a film, record player, or a filmstrip. In this material there is a short biographical sketch of the person. It says what this person can do, because we found one thing; not every banker can speak to a third grade class. Just like a third grade classroom teacher would not necessarily go over real big with a convention of bankers. So what the school district is having to do is train these

individuals in seminars to help them to understand that little folks can only listen about ten minutes and big folks can't listen much longer than that. Now, the teacher is able to thumb through this material and find an individual . . . and have the phone number, address and can even call the office and have that person called by the community liaison individual. This is in action and you can see it if you would like to visit the district. The last component; the job placement center, is one which I think has been discussed here today. There is a direct tie in, for instance, in the job placement center and the Texas Employment Commission. Is there a TEC representative here from Corpus Christi? In San Antonio there is a data processed list of all jobs every morning that is available to this job placement center. Now the job placement center in this public school is not just for students in school. It is for after school, summer jobs, jobs whenever they need it, and jobs upon graduation. It is also open to any person who has graduated or has attended school in that particular school district. Here is a model that is in progress. Certainly it is not in a completed state, but I think I could say that you would be pleased to visit it. I would invite you on behalf of that school district, because they are proud of what they are doing, to visit and see what they are doing at this point.

Now I want to get into my speech. I have a title for it "Career Education - I Would If." Superintendents, college people, that I know, have a habit of saying I would - if. (This superintendent included.) I can think of all kinds of things that I would do - if. So these are the kinds of things I want to talk about today. I

want to bring them into view by saying that I won't be talking long because I don't know very much and anything that I might know is because I tried to take notes and learn from other people. I believe that he is gone, but I have learned as much in public school education from Mr. Wranosky as any other person I know. Because this man has the total concept of helping young people develop and I applaud him for that. There are some things that are interesting in predictions. If you take notes and keep them, here are some things that have been said by people in this very area - people that you know - about the subject that we are discussing today. Dr. Dana Williams, speaking about 4 or 5 years ago on a panel at the Mid-Winter Conference, had 7 minutes, he was the last speaker on the panel to sum up what he thought about the future of Vocational Education. This is what Dr. Williams said 5 years ago: "Vocational Education in the 70's will see a major era of reform and change. If we do not change education by 1980 somebody will do it for us. Financing will move in a direction of more State and Federal funding. We can no longer afford the luxury of the excuse of our inability to measure educational accomplishment. We can and must find a better way to evaluate our success. Public school vocational education will become increasingly responsible to change." How many times have we heard that this morning? The emphasis will move toward:

a. Training young people for their life's work in every course we teach.

b. Winning the classroom teacher to this commitment.

"There will be a greater articulation," Dana always likes to get in big words, there will be a great articulation" between the public school, post-secondary institutions, and business." Those were his words. Let me read you another

one, Dr. L. D. Haskew at a University of Texas seminar for superintendents 6 years ago said this: "We must as educators refuse to be removed from the stance that education is preparation for work." At that same workshop, Superintendent John Lawson many of you know from Ohio predicted the function of the superintendent will move toward the role of a manager." As such he will become the selective agent of change, the innovator looking to his staff for development since he can't possibly know more about all subjects than his personnel. Now may I insert a word of caution? Please understand that I, as John Guemple said, do not come today to criticize education nor do I come to encourage innovation for innovations sake. I think that we can hurt more children that way than any other way I know. I do not come to say that schools can be all things to all people, and I think we need to understand that. There are just some things that schools can't do and we need to admit it. We need to recognize that there are various band wagons that are passed in front of us from time to time, and just because a band wagon is passing by it is not mandatory that we get aboard. However, I do come to remind myself as a school superintendent that our young people do not come from our system, they come through our system, and that is what our problem is. Simply stated, our young people have in our eyes as educators taken on the vision as being born within our particular school district. When they are really passing through we need to get about this business of helping young people to do what I call managing democracy. Young people will have no greater future than we have vision. One of the things that we can do is say that it can't be done, it can't be done, and sure enough it won't be done, but I have yet to see many educators when they

have really made up their minds to get about something who could not get with a group of good teachers and see it come to pass. I come to remind myself that cooperative ventures geared to help a student need not be taboo. It scared me to death when we entered a contractual service agreement with San Antonio College for data processing. It has been one of the most tremendous experiences we have had. We had tried for 4 years to figure out how to get enough money to build a data processing center at Harlandale. You know it is about the 25th largest district and it would be about 5th from the bottom in wealth and there was no way that we could build a data processing center. But we could contract with the college and we have young people in that district now going to San Antonio College studying data processing. There is nothing taboo about this, there is nothing wrong. We really didn't give up any of our "domain" when we allowed our young people to take advantage of the resources that were already available at the Junior College.

Next I think we have the responsibility to see that education in public schools is totally relevant. I said that the title of my speech was "I Would If". Let's take a look at Career Education in terms of, I call it, "educational apprehension" for a better word. These are the things that hold us back. (1) I would enter Career Education or I would attempt to lead my school to Career Education if, I knew it would work in our system. Let me tell you this friends. There is no other program that I know of anywhere that has more transportability (that is a word you want to write in your grant) transportability than Career Education. It will work at Falfurrias, Mr. Strong, it will work at Saint Louis, Missouri, it will work at San Antonio. It might even work in

Longview . . . if I can ever find all the schools. It has a high degree of transportability. It will work. We are almost at the point, nation-wide, if we were to take all the data that is available, to predict fairly closely what it will cost. For instance, it would not be hard to figure what a job placement center would cost for your district based upon the experience of other districts. These are the kinds of things that we need to know. (2) Well, I would attempt a Career Education Program if we were not al ready involved in more programs than we need to be. It is true that we have developed the greatest public school system that the world has ever known. I believe that sincerely. In many cases criticism of public schools results from over expectation rather than under performance. Let me say that again, many people criticize public schools when the school is actually performing at a very good level. It is necessary, however, in view of our accelerated needs to involve our community. The movement toward other than public school programs suggests a strong urgency to look at ourselves. Let me illustrate that. Just because the current reports on voucher systems aren't favorable toward voucher systems, does not mean that education may be moving in that direction and all we have to do as a superintendent, principal, or teacher is ask the question: If I were a parent would I spend my voucher in the school system that I represent? These are some of the things we'd better look at in public school education and I think quite possibly at the post-secondary level.

I was sharing with Dr. Kerr one of the things that happened to a 4th grade class in this career education program to illustrate how the community is interested

and how businessmen work. You are all familiar with the new concept of a total shopping area in some of the discount stores such as Globe, or these kinds of things. There was one in our community and a 4th grade class went down and we decided to join them in that visit. Let me tell you what that store did for these young people. First, they had a marquee out front. When the children arrived in the bus it said "Welcome Kingsborough 4th Grade Students." They were ushered into the cafeteria portion where they were served refreshments. Here they met the manager who spoke to them a few minutes. Then he carried them to the meat market and they met the butcher and they met the stock clerks and they saw where the groceries were stored. They went in the sporting goods department, they went into the selling of the appliances, they went into the bookkeeping department, they went into the process of checking out, and they went into the training program. When they left, the manager gave them a little memento which many of those youngsters, I dare say, still have. The thing that impressed me most, this is not a criticism, this is a point, was the expression of the 4th grade teachers because they had not realized, as I had not realized as a school superintendent that a total community was involved in the world of work within those walls and that total community was ready to become involved with public schools. (3) I would become involved with career education if it did not mean Federal funds. Someone said, "Thank God we don't get all the government we pay for," and I agree with that many times. Career Education need not be such an expensive item. The eagerness of our communities to participate makes this program a most palatable education practice. The strides that have been made in bringing material, resource

people and methodology to us can be done in many cases simply by asking. I illustrate here by saying that there were some 56 occupations identified by a 3rd grade class on the corner of the street by their elementary school. So we need not be so concerned about long distance transportation and this inter-change between industry business and the public school. (4) I would install career education if it were not something we are already doing. Now it is true that many fine teachers have practiced career education all along. But let's not kid ourselves. This is a total concept. Unless we are willing to involve a total commitment to it, anything less is an injustice to this particular part of education. The school administrator or teacher who is not willing to recognize that there is much teaching that "relates to nothing" simply is not taking a realistic look at what we are putting in children's books. Often times parents come to me and say "I want my child to get an education". Why do you want to go to school? They want the child to get an education so they won't have to work! But they don't really mean that like it sounds. I am afraid that young people are coming to school with their buckets and we are filling them up everyday and they go home and then the next day they come back with their buckets and again we fill it up. I think that concept needs to be worked on in our community relations. (5) I would go into career education if my community would accept it. Listen friends, just the other day I read that nationally over 65% of bond issues failed last year. I would suggest that one of the reasons that this may be true is that the public is not satisfied or at least they don't know what we are doing. Now we can make all kinds of excuses for it, but that doesn't give you a majority vote on the bond issue, so

I think we need to look at some of these things. The most destructive path that we can follow is to be led in the direction that emphasis on careers and work means that we have less than maximum ambition for children. I have no use for this anti-intellectualism that is being tagged onto career education because career education in the context we've been talking about today has nothing to do with anti-intellectualism. The thing that worries me is that young people need to be prepared to make a decision about what they are going to do in life. I found a young boy last year in his junior year of high school who wanted to be a vet. I asked him why he wanted to be a veterinarian and he told me that because his mother had told him that as a child he had a fundamental love for animals and he thought that would be a good occupation for him to go into. Now counselors had worked with this young man and they had done a good job about where he could go to school and that sort of thing. But there was one thing lacking and that was my fault as a superintendent. I did not lead my teachers to realize that across the street from that high school was one of the largest animal-dog clinics in the city of San Antonio and that young man had never been in it. He had never walked across the street and stood beside those vets and learned what they do, how they do it, what that building cost, where they got the money to buy it, how hard it is to get help, and these kinds of things he needed to know. These are some of the things we can do simply by making up our mind that we want to do it. Dr. Bruce Thomas of Trinity University has stated our opportunity so well: "These are not easy times to grow up in America. They are exciting times. The young people we teach today may find a cure for cancer; they will discover new and more effective ways to teach and learn; they may eliminate illiteracy; they may do

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away with water and air pollution; they will build new cities and they will reconstruct old ones; and they may, by the grace of God, come closer to permanent peace than man has ever come before." As a school administrator I want to be part of that and I believe the best vehicle I can use is career education. Thank you very much. I am pleased to have been with you today.